

**OTS-Numbers: OTS-1000ex**

| OTS-No   | Gene          | CDS                 | AA           |
|----------|---------------|---------------------|--------------|
| OTS-0001 | <i>AKT1</i>   | c.49G>A             | p.E17K       |
| OTS-0002 | <i>AKT1</i>   | c.155T>G            | p.L52R       |
| OTS-0003 | <i>AKT1</i>   | c.235C>A            | p.Q79K       |
| OTS-0004 | <i>AKT1</i>   | c.726G>A            | p.E242=      |
| OTS-0005 | <i>ALK</i>    | c.3522C>A           | p.F1174L     |
| OTS-0006 | <i>ALK</i>    | c.3824G>A           | p.R1275Q     |
| OTS-0007 | <i>ALK</i>    | c.4338C>T           | p.T1446=     |
| OTS-0008 | <i>ALK</i>    | c.2535T>C           | p.G845=      |
| OTS-0009 | <i>ARID1A</i> | c.5965C>T           | p.R1989X     |
| OTS-0010 | <i>ARID1A</i> | c.5548dupG          | p.D1850Gfs*4 |
| OTS-0011 | <i>ARID1A</i> | c.3826C>T           | p.R1276X     |
| OTS-0012 | <i>ARID1A</i> | c.5161C>T           | p.R1721X     |
| OTS-0013 | <i>ARID1A</i> | c.2077C>T           | p.R693X      |
| OTS-0014 | <i>ARID1A</i> | c.4003C>T           | p.R1335X     |
| OTS-0015 | <i>ARID1A</i> | c.2830C>T           | p.Q944X      |
| OTS-0016 | <i>ARID1A</i> | c.5164C>T           | p.R1722X     |
| OTS-0017 | <i>ARID1A</i> | c.4336C>T           | p.R1446X     |
| OTS-0018 | <i>ARID1A</i> | c.6259G>A           | p.G2087R     |
| OTS-0019 | <i>ARID1A</i> | c.6472C>T           | p.R2158X     |
| OTS-0020 | <i>ARID1A</i> | c.4381C>T           | p.R1461X     |
| OTS-0021 | <i>ARID1A</i> | c.4582C>T           | p.R1528X     |
| OTS-0022 | <i>ARID1A</i> | c.3634C>T           | p.Q1212X     |
| OTS-0023 | <i>ARID1A</i> | c.1897C>T           | p.Q633X      |
| OTS-0024 | <i>ARID1A</i> | c.2248C>T           | p.R750X      |
| OTS-0025 | <i>ARID1A</i> | c.3598C>T           | p.Q1200X     |
| OTS-0026 | <i>ARID1A</i> | c.1435C>T           | p.Q479X      |
| OTS-0027 | <i>ARID1A</i> | c.3424C>T           | p.Q1142X     |
| OTS-0028 | <i>ARID1A</i> | c.4750C>T           | p.Q1584X     |
| OTS-0029 | <i>ARID1A</i> | c.1210C>T           | p.Q404X      |
| OTS-0030 | <i>ARID1A</i> | c.1901C>G           | p.S634X      |
| OTS-0031 | <i>ARID1A</i> | c.1177C>T           | p.Q393X      |
| OTS-0032 | <i>ARID1A</i> | c.1696C>T           | p.Q566X      |
| OTS-0033 | <i>ARID1A</i> | c.2032C>T           | p.Q678X      |
| OTS-0034 | <i>ARID1A</i> | c.4477C>T           | p.Q1493X     |
| OTS-0035 | <i>ARID1A</i> | c.4624G>T           | p.E1542X     |
| OTS-0036 | <i>ARID1A</i> | c.1543C>T           | p.Q515X      |
| OTS-0037 | <i>ARID1A</i> | c.2518C>T           | p.Q840X      |
| OTS-0038 | <i>ARID1A</i> | c.2632C>T           | p.Q878X      |
| OTS-0039 | <i>ARID1A</i> | c.4087C>T           | p.Q1363X     |
| OTS-0040 | <i>ARID1A</i> | c.6260G>A           | p.G2087E     |
| OTS-0041 | <i>ARID2</i>  | c.890C>T            | p.S297F      |
| OTS-0042 | <i>ARID2</i>  | c.940C>T            | p.R314C      |
| OTS-0043 | <i>ARID2</i>  | c.1624C>T           | p.R542X      |
| OTS-0044 | <i>ARID2</i>  | c.820C>T            | p.R274X      |
| OTS-0045 | <i>ASXL1</i>  | c.2077C>T           | p.R693X      |
| OTS-0046 | <i>ASXL1</i>  | c.1934dup           | p.G646WfsX12 |
| OTS-0047 | <i>ATM</i>    | c.5557G>A           | p.D1853N     |
| OTS-0048 | <i>ATM</i>    | c.1009C>T           | p.R337C      |
| OTS-0049 | <i>ATM</i>    | c.9023G>A           | p.R3008H     |
| OTS-0050 | <i>ATM</i>    | c.1010G>A           | p.R337H      |
| OTS-0051 | <i>ATR</i>    | c.7875G>A           | p.Q2625=     |
| OTS-0052 | <i>ATR</i>    | c.5460T>C           | p.Y1820=     |
| OTS-0053 | <i>ATRX</i>   | c.4276C>T           | p.R1426X     |
| OTS-0054 | <i>ATRX</i>   | c.5579A>G           | p.N1860S     |
| OTS-0055 | <i>ATRX</i>   | c.2719C>T           | p.R907X      |
| OTS-0056 | <i>ATRX</i>   | c.2341C>T           | p.R781X      |
| OTS-0057 | <i>ATRX</i>   | c.5408G>A           | p.R1803H     |
| OTS-0058 | <i>ATRX</i>   | c.748C>T            | p.R250X      |
| OTS-0059 | <i>BCL6</i>   | c.1781G>A           | p.R594Q      |
| OTS-0060 | <i>BCOR</i>   | c.4376A>G           | p.N1459S     |
| OTS-0061 | <i>BRAF</i>   | c.1799T>A           | p.V600E      |
| OTS-0062 | <i>BRAF</i>   | c.1798_1799delinsAA | p.V600K      |
| OTS-0063 | <i>BRAF</i>   | c.1801A>G           | p.K601E      |
| OTS-0064 | <i>BRAF</i>   | c.1781A>G           | p.D594G      |
| OTS-0065 | <i>BRAF</i>   | c.1406G>C           | p.G469A      |
| OTS-0066 | <i>BRAF</i>   | c.1780G>A           | p.D594N      |
| OTS-0067 | <i>BRAF</i>   | c.1397G>T           | p.G466V      |

| OTS-No   | Gene          | CDS            | AA           |
|----------|---------------|----------------|--------------|
| OTS-0068 | <i>BRAF</i>   | c.1742A>G      | p.N581S      |
| OTS-0069 | <i>BRAF</i>   | c.1798G>A      | p.V600M      |
| OTS-0070 | <i>BRAF</i>   | c.1397G>A      | p.G466E      |
| OTS-0071 | <i>BRAF</i>   | c.1405G>A      | p.G469R      |
| OTS-0072 | <i>BRAF</i>   | c.1406G>T      | p.G469V      |
| OTS-0073 | <i>BRCA1</i>  | c.2612C>T      | p.P871L      |
| OTS-0074 | <i>BRCA1</i>  | c.3548A>G      | p.K1183R     |
| OTS-0075 | <i>BRCA1</i>  | c.2077G>A      | p.D693N      |
| OTS-0076 | <i>BRCA1</i>  | c.4900A>G      | p.S1634G     |
| OTS-0077 | <i>BRCA1</i>  | c.3113A>G      | p.E1038G     |
| OTS-0078 | <i>BRCA2</i>  | c.7397T>C      | p.V2466A     |
| OTS-0079 | <i>BRCA2</i>  | c.865A>C       | p.N289H      |
| OTS-0080 | <i>BRCA2</i>  | c.2971A>G      | p.N991D      |
| OTS-0081 | <i>BRCA2</i>  | c.1114A>C      | p.N372H      |
| OTS-0082 | <i>BRCA2</i>  | c.1365A>G      | p.S455=      |
| OTS-0083 | <i>BRCA2</i>  | c.2229T>C      | p.H743=      |
| OTS-0084 | <i>BRCA2</i>  | c.3807T>G      | p.V1269=     |
| OTS-0085 | <i>CALR</i>   | c.1099_1150del | p.L367Tfs*46 |
| OTS-0086 | <i>CARD11</i> | c.1876G>A      | p.E626K      |
| OTS-0087 | <i>CARD11</i> | c.688G>A       | p.D230N      |
| OTS-0088 | <i>CD79B</i>  | c.589T>C       | p.Y197H      |
| OTS-0089 | <i>CD79B</i>  | c.590A>G       | p.Y197C      |
| OTS-0090 | <i>CD79B</i>  | c.589T>A       | p.Y197N      |
| OTS-0091 | <i>CD79B</i>  | c.590A>C       | p.Y197S      |
| OTS-0092 | <i>CD79B</i>  | c.590A>T       | p.Y197F      |
| OTS-0093 | <i>CD79B</i>  | c.589T>G       | p.Y197D      |
| OTS-0094 | <i>CDH1</i>   | c.67C>T        | p.Q23X       |
| OTS-0095 | <i>BRCA1</i>  | c.3119G>A      | p.S1040N     |
| OTS-0096 | <i>CDH1</i>   | c.1774G>A      | p.A592T      |
| OTS-0097 | <i>CDH1</i>   | c.1901C>T      | p.A634V      |
| OTS-0098 | <i>CDH1</i>   | c.187C>T       | p.R63X       |
| OTS-0099 | <i>CDKN2A</i> | c.238C>T       | p.R80X       |
| OTS-0100 | <i>CDKN2A</i> | c.172C>T       | p.R58X       |
| OTS-0101 | <i>CDKN2A</i> | c.247C>T       | p.H83Y       |
| OTS-0102 | <i>CDKN2A</i> | c.330G>A       | p.W110X      |
| OTS-0103 | <i>CDKN2A</i> | c.341C>T       | p.P114L      |
| OTS-0104 | <i>CDKN2A</i> | c.262G>T       | p.E88X       |
| OTS-0105 | <i>CDKN2A</i> | c.329G>A       | p.W110X      |
| OTS-0106 | <i>CDKN2A</i> | c.358G>T       | p.E120X      |
| OTS-0107 | <i>CDKN2A</i> | c.322G>T       | p.D108Y      |
| OTS-0108 | <i>CDKN2A</i> | c.250G>T       | p.D84Y       |
| OTS-0109 | <i>CDKN2A</i> | c.250G>A       | p.D84N       |
| OTS-0110 | <i>CDKN2A</i> | c.205G>T       | p.E69X       |
| OTS-0111 | <i>CDKN2A</i> | c.242C>T       | p.P81L       |
| OTS-0112 | <i>CDKN2A</i> | c.148C>T       | p.Q50X       |
| OTS-0113 | <i>CDKN2A</i> | c.322G>A       | p.D108N      |
| OTS-0114 | <i>CDKN2A</i> | c.35C>A        | p.S12X       |
| OTS-0115 | <i>CDKN2A</i> | c.143C>T       | p.P48L       |
| OTS-0116 | <i>CDKN2A</i> | c.181G>T       | p.E61X       |
| OTS-0117 | <i>CDKN2A</i> | c.251A>G       | p.D84G       |
| OTS-0118 | <i>CDKN2A</i> | c.262G>A       | p.E88K       |
| OTS-0119 | <i>CDKN2A</i> | c.322G>C       | p.D108H      |
| OTS-0120 | <i>CDKN2A</i> | c.442G>A       | p.A148T      |
| OTS-0121 | <i>CDKN2A</i> | c.387C>A       | p.Y129X      |
| OTS-0122 | <i>CDKN2A</i> | c.107C>G       | p.A36G       |
| OTS-0123 | <i>CDKN2A</i> | c.170C>T       | p.A57V       |
| OTS-0124 | <i>CDKN2A</i> | c.248A>G       | p.H83R       |
| OTS-0125 | <i>CDKN2A</i> | c.305C>T       | p.A102V      |
| OTS-0126 | <i>CDKN2A</i> | c.45G>A        | p.W15X       |
| OTS-0127 | <i>CDKN2A</i> | c.220G>T       | p.D74Y       |
| OTS-0128 | <i>CDKN2A</i> | c.97G>T        | p.E33X       |
| OTS-0129 | <i>CDKN2A</i> | c.457G>A       | p.E153K      |
| OTS-0130 | <i>CDKN2A</i> | c.244G>A       | p.V82M       |
| OTS-0131 | <i>CDKN2A</i> | c.227C>T       | p.A76V       |
| OTS-0132 | <i>CDKN2A</i> | c.247C>G       | p.H83D       |
| OTS-0133 | <i>CDKN2A</i> | c.220G>A       | p.D74N       |
| OTS-0134 | <i>CDKN2A</i> | c.355G>T       | p.E119X      |

**OTS-Numbers: OTS-1000ex**

| OTS-No   | Gene          | CDS       | AA       |
|----------|---------------|-----------|----------|
| OTS-0135 | <i>CDKN2A</i> | c.387C>G  | p.Y129X  |
| OTS-0136 | <i>CDKN2A</i> | c.132C>A  | p.Y44X   |
| OTS-0137 | <i>CDKN2A</i> | c.290T>G  | p.L97R   |
| OTS-0138 | <i>CDKN2A</i> | c.221A>C  | p.D74A   |
| OTS-0139 | <i>CDKN2A</i> | c.305C>A  | p.A102E  |
| OTS-0140 | <i>CDKN2A</i> | c.226G>A  | p.A76T   |
| OTS-0141 | <i>CDKN2A</i> | c.389T>A  | p.L130Q  |
| OTS-0142 | <i>CDKN2A</i> | c.202G>A  | p.A68T   |
| OTS-0143 | <i>CDKN2A</i> | c.301G>T  | p.G101W  |
| OTS-0144 | <i>CDKN2A</i> | c.128G>T  | p.S43I   |
| OTS-0145 | <i>CDKN2A</i> | c.323A>G  | p.D108G  |
| OTS-0146 | <i>CDKN2A</i> | c.251A>T  | p.D84V   |
| OTS-0147 | <i>CDKN2A</i> | c.392G>A  | p.R131H  |
| OTS-0148 | <i>CDKN2A</i> | c.79G>T   | p.E27X   |
| OTS-0149 | <i>CHD4</i>   | c.417G>T  | p.E139D  |
| OTS-0150 | <i>CHD4</i>   | c.2924G>A | p.R975H  |
| OTS-0151 | <i>CHD4</i>   | c.3484C>T | p.R1162W |
| OTS-0152 | <i>CHD4</i>   | c.3313C>T | p.R1105W |
| OTS-0153 | <i>CHD4</i>   | c.4013G>T | p.R1338I |
| OTS-0154 | <i>CIC</i>    | c.2816G>C | p.G939A  |
| OTS-0155 | <i>CIC</i>    | c.643C>T  | p.R215W  |
| OTS-0156 | <i>CIC</i>    | c.604C>T  | p.R202W  |
| OTS-0157 | <i>CIC</i>    | c.601C>T  | p.R201W  |
| OTS-0158 | <i>CIC</i>    | c.644G>A  | p.R215Q  |
| OTS-0159 | <i>CIC</i>    | c.4533C>T | p.I1511= |
| OTS-0160 | <i>CTNNB1</i> | c.121A>G  | p.T41A   |
| OTS-0161 | <i>CTNNB1</i> | c.134C>T  | p.S45F   |
| OTS-0162 | <i>CTNNB1</i> | c.133T>C  | p.S45P   |
| OTS-0163 | <i>CTNNB1</i> | c.110C>T  | p.S37F   |
| OTS-0164 | <i>CTNNB1</i> | c.98C>G   | p.S33C   |
| OTS-0165 | <i>CTNNB1</i> | c.110C>G  | p.S37C   |
| OTS-0166 | <i>CTNNB1</i> | c.94G>T   | p.D32Y   |
| OTS-0167 | <i>CTNNB1</i> | c.98C>T   | p.S33F   |
| OTS-0168 | <i>CTNNB1</i> | c.122C>T  | p.T41I   |
| OTS-0169 | <i>CTNNB1</i> | c.94G>A   | p.D32N   |
| OTS-0170 | <i>CTNNB1</i> | c.101G>T  | p.G34V   |
| OTS-0171 | <i>CTNNB1</i> | c.101G>A  | p.G34E   |
| OTS-0172 | <i>CTNNB1</i> | c.95A>G   | p.D32G   |
| OTS-0173 | <i>CTNNB1</i> | c.100G>A  | p.G34R   |
| OTS-0174 | <i>CTNNB1</i> | c.97T>C   | p.S33P   |
| OTS-0175 | <i>CTNNB1</i> | c.98C>A   | p.S33Y   |
| OTS-0176 | <i>CTNNB1</i> | c.109T>G  | p.S37A   |
| OTS-0177 | <i>CTNNB1</i> | c.95A>T   | p.D32V   |
| OTS-0178 | <i>CTNNB1</i> | c.94G>C   | p.D32H   |
| OTS-0179 | <i>CTNNB1</i> | c.107A>C  | p.H36P   |
| OTS-0180 | <i>CTNNB1</i> | c.110C>A  | p.S37Y   |
| OTS-0181 | <i>CTNNB1</i> | c.104T>G  | p.I35S   |
| OTS-0182 | <i>CTNNB1</i> | c.1004A>T | p.K335I  |
| OTS-0183 | <i>CTNNB1</i> | c.109T>C  | p.S37P   |
| OTS-0184 | <i>CTNNB1</i> | c.134C>A  | p.S45Y   |
| OTS-0185 | <i>CTNNB1</i> | c.134C>G  | p.S45C   |
| OTS-0186 | <i>CTNNB1</i> | c.97T>G   | p.S33A   |
| OTS-0187 | <i>CTNNB1</i> | c.100G>C  | p.G34R   |
| OTS-0188 | <i>CTNNB1</i> | c.133T>G  | p.S45A   |
| OTS-0189 | <i>CTNNB1</i> | c.95A>C   | p.D32A   |
| OTS-0190 | <i>CTNNB1</i> | c.1161T>A | p.N387K  |
| OTS-0191 | <i>CTNNB1</i> | c.104T>C  | p.I35T   |
| OTS-0192 | <i>CTNNB1</i> | c.1004A>C | p.K335T  |
| OTS-0193 | <i>CTNNB1</i> | c.1161T>G | p.N387K  |
| OTS-0194 | <i>CTNNB1</i> | c.130C>G  | p.P44A   |
| OTS-0195 | <i>CTNNB1</i> | c.122C>A  | p.T41N   |
| OTS-0196 | <i>DICER1</i> | c.5113G>A | p.E1705K |
| OTS-0197 | <i>DICER1</i> | c.5125G>A | p.D1709N |
| OTS-0198 | <i>DICER1</i> | c.5438A>G | p.E1813G |
| OTS-0199 | <i>DICER1</i> | c.5425G>A | p.G1809R |
| OTS-0200 | <i>DNMT3A</i> | c.2645G>A | p.R882H  |
| OTS-0201 | <i>DNMT3A</i> | c.2644C>T | p.R882C  |

| OTS-No   | Gene         | CDS            | AA             |
|----------|--------------|----------------|----------------|
| OTS-0202 | <i>EGFR</i>  | exon 19 del    | exon 19 del    |
| OTS-0203 | <i>EGFR</i>  | c.2573T>G      | p.L858R        |
| OTS-0204 | <i>EGFR</i>  | c.2235_2249del | p.E746_A750del |
| OTS-0205 | <i>EGFR</i>  | c.2236_2250del | p.E746_A750del |
| OTS-0206 | <i>EGFR</i>  | c.2369C>T      | p.T790M        |
| OTS-0207 | <i>EGFR</i>  | c.2582T>A      | p.L861Q        |
| OTS-0208 | <i>EGFR</i>  | c.2156G>C      | p.G719A        |
| OTS-0209 | <i>EGFR</i>  | c.2155G>A      | p.G719S        |
| OTS-0210 | <i>EGFR</i>  | c.2303G>T      | p.S768I        |
| OTS-0211 | <i>EGFR</i>  | c.866C>T       | p.A289V        |
| OTS-0212 | <i>EGFR</i>  | c.1793G>T      | p.G598V        |
| OTS-0213 | <i>EGFR</i>  | c.2155G>T      | p.G719C        |
| OTS-0214 | <i>EGFR</i>  | c.2125G>A      | p.E709K        |
| OTS-0215 | <i>EGFR</i>  | c.323G>A       | p.R108K        |
| OTS-0216 | <i>EGFR</i>  | c.865G>A       | p.A289T        |
| OTS-0217 | <i>EGFR</i>  | c.2497T>G      | p.L833V        |
| OTS-0218 | <i>EGFR</i>  | c.2126A>C      | p.E709A        |
| OTS-0219 | <i>EGFR</i>  | c.664C>T       | p.R222C        |
| OTS-0220 | <i>EGFR</i>  | c.1562G>A      | p.R521K        |
| OTS-0221 | <i>EGFR</i>  | c.2543C>A      | p.P848L        |
| OTS-0222 | <i>EGFR</i>  | c.185T>G       | p.L62R         |
| OTS-0223 | <i>EGFR</i>  | c.2320G>A      | p.V774M        |
| OTS-0224 | <i>EGFR</i>  | c.2240T>C      | p.L747S        |
| OTS-0225 | <i>EGFR</i>  | c.787A>C       | p.T263P        |
| OTS-0226 | <i>EGFR</i>  | c.2504A>T      | p.H835L        |
| OTS-0227 | <i>EGFR</i>  | c.866C>A       | p.A289D        |
| OTS-0228 | <i>EGFR</i>  | c.2527G>A      | p.V843I        |
| OTS-0229 | <i>EGFR</i>  | c.2327G>A      | p.R776H        |
| OTS-0230 | <i>EGFR</i>  | c.754C>T       | p.R252C        |
| OTS-0231 | <i>EGFR</i>  | c.340G>A       | p.E114K        |
| OTS-0232 | <i>ERBB2</i> | c.929C>T       | p.S310F        |
| OTS-0233 | <i>ERBB2</i> | c.2264T>C      | p.L755S        |
| OTS-0234 | <i>ERBB2</i> | c.2329G>T      | p.V777L        |
| OTS-0235 | <i>ERBB2</i> | c.2033G>A      | p.R678Q        |
| OTS-0236 | <i>ERBB2</i> | c.3508C>G      | p.P1170A       |
| OTS-0237 | <i>ERBB2</i> | c.2524G>A      | p.V842I        |
| OTS-0238 | <i>ERBB2</i> | c.929C>A       | p.S310Y        |
| OTS-0239 | <i>ERBB2</i> | c.1963A>G      | p.L655V        |
| OTS-0240 | <i>ERBB2</i> | c.2305G>T      | p.D769Y        |
| OTS-0241 | <i>ERBB2</i> | c.2301C>G      | p.I767M        |
| OTS-0242 | <i>ERBB2</i> | c.2329G>C      | p.V777L        |
| OTS-0243 | <i>ERBB2</i> | c.2606T>G      | p.L869R        |
| OTS-0244 | <i>ERBB2</i> | c.2584A>G      | p.T862A        |
| OTS-0245 | <i>ERBB2</i> | c.2305G>C      | p.D769H        |
| OTS-0246 | <i>ERBB2</i> | c.3647C>A      | p.A1216D       |
| OTS-0247 | <i>ERBB2</i> | c.1960A>G      | p.L654V        |
| OTS-0248 | <i>ERBB2</i> | c.2198C>T      | p.T733I        |
| OTS-0249 | <i>ERBB2</i> | c.2327G>T      | p.G776V        |
| OTS-0250 | <i>ERBB2</i> | c.829G>T       | p.D277Y        |
| OTS-0251 | <i>ERBB2</i> | c.520C>T       | p.H174Y        |
| OTS-0252 | <i>ERBB2</i> | c.808G>T       | p.A270S        |
| OTS-0253 | <i>ERBB2</i> | c.1979G>A      | p.G660D        |
| OTS-0254 | <i>ERBB2</i> | c.3382G>A      | p.V1128I       |
| OTS-0255 | <i>ERBB2</i> | c.428G>A       | p.R143Q        |
| OTS-0256 | <i>ERBB2</i> | c.874G>C       | p.G292R        |
| OTS-0257 | <i>ERBB2</i> | c.2305G>A      | p.D769N        |
| OTS-0258 | <i>ERBB2</i> | c.2350C>T      | p.R784C        |
| OTS-0259 | <i>ERBB3</i> | c.310G>A       | p.V104M        |
| OTS-0260 | <i>ERBB3</i> | c.2783A>G      | p.E928G        |
| OTS-0261 | <i>ERBB3</i> | c.310G>T       | p.V104L        |
| OTS-0262 | <i>ERBB3</i> | c.889G>T       | p.D297Y        |
| OTS-0263 | <i>ERBB3</i> | c.850G>A       | p.G284R        |
| OTS-0264 | <i>ERBB3</i> | c.695C>T       | p.A232V        |
| OTS-0265 | <i>ERBB3</i> | c.994G>A       | p.E332K        |
| OTS-0266 | <i>ERBB3</i> | c.3355A>T      | p.S1119C       |
| OTS-0267 | <i>ERBB3</i> | c.2537G>T      | p.S846I        |
| OTS-0268 | <i>ERBB3</i> | c.985A>G       | p.K329E        |

**OTS-Numbers: OTS-1000ex**

| OTS-No   | Gene         | CDS       | AA       |
|----------|--------------|-----------|----------|
| OTS-0269 | <i>ERBB3</i> | c.1423C>T | p.R475W  |
| OTS-0270 | <i>ERBB3</i> | c.2000G>A | p.R667H  |
| OTS-0271 | <i>ERBB3</i> | c.273G>A  | p.M91I   |
| OTS-0272 | <i>ERBB3</i> | c.3348G>A | p.R1116= |
| OTS-0273 | <i>ERBB4</i> | c.2131C>T | p.R711C  |
| OTS-0274 | <i>ERBB4</i> | c.316C>T  | p.R106C  |
| OTS-0275 | <i>ERBB4</i> | c.55A>G   | p.T19A   |
| OTS-0276 | <i>ERBB4</i> | c.283C>T  | p.R95C   |
| OTS-0277 | <i>ERBB4</i> | c.1354G>A | p.E452K  |
| OTS-0278 | <i>ERBB4</i> | c.2512C>T | p.R838X  |
| OTS-0279 | <i>ERCC2</i> | c.934G>A  | p.D312N  |
| OTS-0280 | <i>ERCC2</i> | c.713A>G  | p.N238S  |
| OTS-0281 | <i>ERCC5</i> | c.1586G>C | p.C529S  |
| OTS-0282 | <i>ERCC5</i> | c.760A>G  | p.M254V  |
| OTS-0283 | <i>ERCC5</i> | c.641G>A  | p.R214H  |
| OTS-0284 | <i>ERCC5</i> | c.2636A>G | p.N879S  |
| OTS-0285 | <i>ERCC5</i> | c.3310G>C | p.D1104H |
| OTS-0286 | <i>ERCC5</i> | c.3157G>C | p.G1053R |
| OTS-0287 | <i>ESR1</i>  | c.908A>G  | p.K303R  |
| OTS-0288 | <i>ESR1</i>  | c.1613A>G | p.D538G  |
| OTS-0289 | <i>ESR1</i>  | c.1610A>C | p.Y537S  |
| OTS-0290 | <i>ESR1</i>  | c.1138G>C | p.E380Q  |
| OTS-0291 | <i>ESR1</i>  | c.1610A>G | p.Y537C  |
| OTS-0292 | <i>ESR1</i>  | c.1609T>A | p.Y537N  |
| OTS-0293 | <i>ESR1</i>  | c.1607T>A | p.L536H  |
| OTS-0294 | <i>ESR1</i>  | c.739G>A  | p.E247K  |
| OTS-0295 | <i>ESR1</i>  | c.1387T>C | p.S463P  |
| OTS-0296 | <i>ESR1</i>  | c.932C>T  | p.T311M  |
| OTS-0297 | <i>ESR1</i>  | c.1688C>T | p.T563M  |
| OTS-0298 | <i>EZH2</i>  | c.1936T>A | p.Y646N  |
| OTS-0299 | <i>EZH2</i>  | c.1937A>T | p.Y646F  |
| OTS-0300 | <i>EZH2</i>  | c.1937A>C | p.Y646S  |
| OTS-0301 | <i>EZH2</i>  | c.1936T>C | p.Y646H  |
| OTS-0302 | <i>EZH2</i>  | c.2045C>G | p.A682G  |
| OTS-0303 | <i>EZH2</i>  | c.2075C>T | p.A692V  |
| OTS-0304 | <i>FANCA</i> | c.2151G>T | p.M717I  |
| OTS-0305 | <i>FANCA</i> | c.4303G>C | p.A1435P |
| OTS-0306 | <i>FANCA</i> | c.1501G>A | p.G501S  |
| OTS-0307 | <i>FANCA</i> | c.2426G>A | p.G809D  |
| OTS-0308 | <i>FBXW7</i> | c.1393C>T | p.R465C  |
| OTS-0309 | <i>FBXW7</i> | c.1394G>A | p.R465H  |
| OTS-0310 | <i>FBXW7</i> | c.1513C>T | p.R505C  |
| OTS-0311 | <i>FBXW7</i> | c.1436G>A | p.R479Q  |
| OTS-0312 | <i>FBXW7</i> | c.1745C>T | p.S582L  |
| OTS-0313 | <i>FBXW7</i> | c.1513C>G | p.R505G  |
| OTS-0314 | <i>FBXW7</i> | c.2065C>T | p.R689W  |
| OTS-0315 | <i>FBXW7</i> | c.832C>T  | p.R278X  |
| OTS-0316 | <i>FBXW7</i> | c.1099C>T | p.R367X  |
| OTS-0317 | <i>FBXW7</i> | c.1972C>T | p.R658X  |
| OTS-0318 | <i>FBXW7</i> | c.1268G>T | p.G423V  |
| OTS-0319 | <i>FBXW7</i> | c.1514G>A | p.R505H  |
| OTS-0320 | <i>FBXW7</i> | c.1435C>G | p.R479G  |
| OTS-0321 | <i>FBXW7</i> | c.1514G>T | p.R505L  |
| OTS-0322 | <i>FBXW7</i> | c.1177C>T | p.R393X  |
| OTS-0323 | <i>FBXW7</i> | c.1435C>T | p.R479X  |
| OTS-0324 | <i>FBXW7</i> | c.1429G>A | p.G477S  |
| OTS-0325 | <i>FBXW7</i> | c.1634A>G | p.Y545C  |
| OTS-0326 | <i>FBXW7</i> | c.2077G>A | p.E693K  |
| OTS-0327 | <i>FBXW7</i> | c.1436G>C | p.R479P  |
| OTS-0328 | <i>FBXW7</i> | c.1436G>T | p.R479L  |
| OTS-0329 | <i>FBXW7</i> | c.1385C>T | p.S462F  |
| OTS-0330 | <i>FBXW7</i> | c.2066G>A | p.R689Q  |
| OTS-0331 | <i>FBXW7</i> | c.670C>T  | p.R224X  |
| OTS-0332 | <i>FBXW7</i> | c.1513C>A | p.R505S  |
| OTS-0333 | <i>FBXW7</i> | c.1322G>A | p.R441Q  |
| OTS-0334 | <i>FBXW7</i> | c.664C>T  | p.R222X  |
| OTS-0335 | <i>FBXW7</i> | c.1627A>G | p.R543G  |

| OTS-No   | Gene         | CDS       | AA      |
|----------|--------------|-----------|---------|
| OTS-0336 | <i>FBXW7</i> | c.1973G>A | p.R658Q |
| OTS-0337 | <i>FBXW7</i> | c.41G>A   | p.R14Q  |
| OTS-0338 | <i>FBXW7</i> | c.1394G>T | p.R465L |
| OTS-0339 | <i>FBXW7</i> | c.1558G>A | p.D520N |
| OTS-0340 | <i>FGFR2</i> | c.755C>G  | p.S252W |
| OTS-0341 | <i>FGFR2</i> | c.1650T>A | p.N550K |
| OTS-0342 | <i>FGFR2</i> | c.1147T>C | p.C383R |
| OTS-0343 | <i>FGFR2</i> | c.1127A>G | p.Y376C |
| OTS-0344 | <i>FGFR2</i> | c.1650T>G | p.N550K |
| OTS-0345 | <i>FGFR2</i> | c.1978A>G | p.K660E |
| OTS-0346 | <i>FGFR2</i> | c.758C>G  | p.P253R |
| OTS-0347 | <i>FGFR2</i> | c.2183A>G | p.N728S |
| OTS-0348 | <i>FGFR2</i> | c.870G>C  | p.W290C |
| OTS-0349 | <i>FGFR2</i> | c.629G>A  | p.R210Q |
| OTS-0350 | <i>FGFR3</i> | c.746C>G  | p.S249C |
| OTS-0351 | <i>FGFR3</i> | c.1124A>G | p.Y375C |
| OTS-0352 | <i>FGFR3</i> | c.742C>T  | p.R248C |
| OTS-0353 | <i>FLT3</i>  | c.2503G>T | p.D835Y |
| OTS-0354 | <i>FLT3</i>  | c.2504A>T | p.D835V |
| OTS-0355 | <i>FLT3</i>  | c.2503G>C | p.D835H |
| OTS-0356 | <i>FLT3</i>  | c.680C>T  | p.T227M |
| OTS-0357 | <i>FLT3</i>  | c.2028C>A | p.N676K |
| OTS-0358 | <i>FLT3</i>  | c.2505T>G | p.D835E |
| OTS-0359 | <i>FOXA1</i> | c.526A>G  | p.I176V |
| OTS-0360 | <i>FOXA1</i> | c.749C>T  | p.S250F |
| OTS-0361 | <i>FOXA1</i> | c.798C>G  | p.F266L |
| OTS-0362 | <i>FOXA1</i> | c.676G>A  | p.D226N |
| OTS-0363 | <i>FOXL2</i> | c.402C>G  | p.C134W |
| OTS-0364 | <i>FOXP1</i> | c.1343C>T | p.S448L |
| OTS-0365 | <i>FOXP1</i> | c.97C>T   | p.R33W  |
| OTS-0366 | <i>FOXP1</i> | c.106C>T  | p.R36W  |
| OTS-0367 | <i>GNA11</i> | c.626A>T  | p.Q209L |
| OTS-0368 | <i>GNA11</i> | c.547C>T  | p.R183C |
| OTS-0369 | <i>GNAQ</i>  | c.626A>T  | p.Q209L |
| OTS-0370 | <i>GNAQ</i>  | c.626A>C  | p.Q209P |
| OTS-0371 | <i>GNAQ</i>  | c.286A>T  | p.T96S  |
| OTS-0372 | <i>GNAQ</i>  | c.548G>A  | p.R183Q |
| OTS-0373 | <i>GNAS</i>  | c.2530C>T | p.R844C |
| OTS-0374 | <i>GNAS</i>  | c.2531G>A | p.R844H |
| OTS-0375 | <i>H3F3A</i> | c.83A>T   | p.K28M  |
| OTS-0376 | <i>H3F3A</i> | c.103G>T  | p.G35W  |
| OTS-0377 | <i>H3F3A</i> | c.103G>A  | p.G35R  |
| OTS-0378 | <i>H3F3B</i> | c.110A>T  | p.K37M  |
| OTS-0379 | <i>HRAS</i>  | c.37G>C   | p.G13R  |
| OTS-0380 | <i>HRAS</i>  | c.182A>G  | p.Q61R  |
| OTS-0381 | <i>HRAS</i>  | c.35G>T   | p.G12V  |
| OTS-0382 | <i>HRAS</i>  | c.182A>T  | p.Q61L  |
| OTS-0383 | <i>HRAS</i>  | c.181C>A  | p.Q61K  |
| OTS-0384 | <i>HRAS</i>  | c.34G>A   | p.G12S  |
| OTS-0385 | <i>HRAS</i>  | c.35G>A   | p.G12D  |
| OTS-0386 | <i>HRAS</i>  | c.38G>T   | p.G13V  |
| OTS-0387 | <i>HRAS</i>  | c.34G>T   | p.G12C  |
| OTS-0388 | <i>HRAS</i>  | c.38G>A   | p.G13D  |
| OTS-0389 | <i>HRAS</i>  | c.37G>A   | p.G13S  |
| OTS-0390 | <i>HRAS</i>  | c.183G>T  | p.Q61H  |
| OTS-0391 | <i>HRAS</i>  | c.34G>C   | p.G12R  |
| OTS-0392 | <i>HRAS</i>  | c.35G>C   | p.G12A  |
| OTS-0393 | <i>HRAS</i>  | c.37G>T   | p.G13C  |
| OTS-0394 | <i>HRAS</i>  | c.175G>A  | p.A59T  |
| OTS-0395 | <i>HRAS</i>  | c.351G>C  | p.K117N |
| OTS-0396 | <i>HRAS</i>  | c.351G>T  | p.K117N |
| OTS-0397 | <i>HRAS</i>  | c.81T>C   | p.H27=  |
| OTS-0398 | <i>IDH1</i>  | c.395G>A  | p.R132H |
| OTS-0399 | <i>IDH1</i>  | c.394C>T  | p.R132C |
| OTS-0400 | <i>IDH1</i>  | c.394C>G  | p.R132G |
| OTS-0401 | <i>IDH1</i>  | c.394C>A  | p.R132S |
| OTS-0402 | <i>IDH1</i>  | c.395G>T  | p.R132L |

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| OTS-No   | Gene   | CDS       | AA       |
|----------|--------|-----------|----------|
| OTS-0403 | IDH2   | c.419G>A  | p.R140Q  |
| OTS-0404 | IDH2   | c.515G>A  | p.R172K  |
| OTS-0405 | IDH2   | c.516G>T  | p.R172S  |
| OTS-0406 | IDH2   | c.515G>T  | p.R172M  |
| OTS-0407 | IDH2   | c.514A>G  | p.R172G  |
| OTS-0408 | IDH2   | c.514A>T  | p.R172W  |
| OTS-0409 | IDH2   | c.516G>C  | p.R172S  |
| OTS-0410 | IDH2   | c.418C>T  | p.R140W  |
| OTS-0411 | IRF4   | c.176A>G  | p.K59R   |
| OTS-0412 | IRF4   | c.208C>G  | p.L70V   |
| OTS-0413 | JAK2   | c.1849G>T | p.V617F  |
| OTS-0414 | JAK3   | c.1533G>A | p.M511I  |
| OTS-0415 | JAK3   | c.2164G>A | p.V722I  |
| OTS-0416 | JAK3   | c.1970G>A | p.R657Q  |
| OTS-0417 | KDR    | c.1416A>T | p.Q472H  |
| OTS-0418 | KDR    | c.889G>A  | p.V297I  |
| OTS-0419 | KDR    | c.3095G>A | p.R1032Q |
| OTS-0420 | KDR    | c.1040G>A | p.R347H  |
| OTS-0421 | KIT    | c.2447A>T | p.D816V  |
| OTS-0422 | KIT    | c.1727T>C | p.L576P  |
| OTS-0423 | KIT    | c.1676T>A | p.V559D  |
| OTS-0424 | KIT    | c.2446G>T | p.D816Y  |
| OTS-0425 | KIT    | c.2446G>C | p.D816H  |
| OTS-0426 | KIT    | c.1924A>G | p.K642E  |
| OTS-0427 | KIT    | c.1679T>A | p.V560D  |
| OTS-0428 | KIT    | c.1621A>C | p.M541L  |
| OTS-0429 | KIT    | c.2466T>G | p.N822K  |
| OTS-0430 | KIT    | c.1961T>C | p.V654A  |
| OTS-0431 | KIT    | c.2466T>A | p.N822K  |
| OTS-0432 | KIT    | c.1669T>G | p.W557G  |
| OTS-0433 | KIT    | c.1676T>C | p.V559A  |
| OTS-0434 | KRAS   | c.35G>A   | p.G12D   |
| OTS-0435 | KRAS   | c.35G>T   | p.G12V   |
| OTS-0436 | KRAS   | c.38G>A   | p.G13D   |
| OTS-0437 | KRAS   | c.34G>T   | p.G12C   |
| OTS-0438 | KRAS   | c.35G>C   | p.G12A   |
| OTS-0439 | KRAS   | c.34G>A   | p.G12S   |
| OTS-0440 | KRAS   | c.34G>C   | p.G12R   |
| OTS-0441 | KRAS   | c.37G>T   | p.G13C   |
| OTS-0442 | KRAS   | c.183A>C  | p.Q61H   |
| OTS-0443 | KRAS   | c.436G>A  | p.A146T  |
| OTS-0444 | KRAS   | c.182A>G  | p.Q61R   |
| OTS-0445 | KRAS   | c.182A>T  | p.Q61L   |
| OTS-0446 | KRAS   | c.183A>T  | p.Q61H   |
| OTS-0447 | KRAS   | c.37G>A   | p.G13S   |
| OTS-0448 | KRAS   | c.37G>C   | p.G13R   |
| OTS-0449 | KRAS   | c.437C>T  | p.A146V  |
| OTS-0450 | KRAS   | c.181C>A  | p.Q61K   |
| OTS-0451 | KRAS   | c.38G>C   | p.G13A   |
| OTS-0452 | KRAS   | c.38G>T   | p.G13V   |
| OTS-0453 | KRAS   | c.351A>T  | p.K117N  |
| OTS-0454 | KRAS   | c.175G>A  | p.A59T   |
| OTS-0455 | KRAS   | c.40G>A   | p.V14I   |
| OTS-0456 | KRAS   | c.64C>A   | p.Q22K   |
| OTS-0457 | KRAS   | c.182A>C  | p.Q61P   |
| OTS-0458 | KRAS   | c.436G>C  | p.A146P  |
| OTS-0459 | KRAS   | c.351A>C  | p.K117N  |
| OTS-0460 | KRAS   | c.57G>T   | p.L19F   |
| OTS-0461 | KRAS   | c.57G>C   | p.L19F   |
| OTS-0462 | KRAS   | c.53C>A   | p.A18D   |
| OTS-0463 | KRAS   | c.173C>T  | p.T58I   |
| OTS-0464 | KRAS   | c.187G>A  | p.E63K   |
| OTS-0465 | KRAS   | c.179G>A  | p.G60D   |
| OTS-0466 | KRAS   | c.28G>A   | p.G10R   |
| OTS-0467 | KRAS   | c.176C>G  | p.A59G   |
| OTS-0468 | KRAS   | c.181C>G  | p.Q61E   |
| OTS-0469 | MAP2K1 | c.370C>T  | p.P124S  |

| OTS-No   | Gene   | CDS       | AA           |
|----------|--------|-----------|--------------|
| OTS-0470 | MAP2K1 | c.167A>C  | p.Q56P       |
| OTS-0471 | MAP2K1 | c.171G>T  | p.K57N       |
| OTS-0472 | MAP2K1 | c.607G>A  | p.E203K      |
| OTS-0473 | MAP2K1 | c.371C>T  | p.P124L      |
| OTS-0474 | MAP2K1 | c.383G>A  | p.G128D      |
| OTS-0475 | MAP2K1 | c.199G>A  | p.D67N       |
| OTS-0476 | MAP2K1 | c.361T>A  | p.C121S      |
| OTS-0477 | MAPK1  | c.964G>A  | p.E322K      |
| OTS-0478 | MAPK1  | c.961G>A  | p.D321N      |
| OTS-0479 | MAPK1  | c.404G>A  | p.R135K      |
| OTS-0480 | MAX    | c.179G>A  | p.R60Q       |
| OTS-0481 | MAX    | c.83A>G   | p.H28R       |
| OTS-0482 | MAX    | c.223C>T  | p.R75X       |
| OTS-0483 | MED12  | c.131G>A  | p.G44D       |
| OTS-0484 | MED12  | c.130G>A  | p.G44S       |
| OTS-0485 | MET    | c.3029C>T | p.T1010I     |
| OTS-0486 | MET    | c.3757T>G | p.Y1253D     |
| OTS-0487 | MET    | c.1124A>G | p.N375S      |
| OTS-0488 | MLH1   | c.655A>G  | p.L219V      |
| OTS-0489 | MLH1   | c.1151T>A | p.V384D      |
| OTS-0490 | MPL    | c.1544G>T | p.W515L      |
| OTS-0491 | MSH2   | c.965G>A  | p.G322D      |
| OTS-0492 | MSH2   | c.1738G>T | p.E580X      |
| OTS-0493 | MSH2   | c.2038C>T | p.R680X      |
| OTS-0494 | MSH6   | c.276A>G  | p.P92=       |
| OTS-0495 | MSH6   | c.3261del | p.F1088Sfs*2 |
| OTS-0496 | MSH6   | c.3261dup | p.F1088Lfs*5 |
| OTS-0497 | MSH6   | c.116G>A  | p.G39E       |
| OTS-0498 | MTOR   | c.6644C>A | p.S2215Y     |
| OTS-0499 | MTOR   | c.6644C>T | p.S2215F     |
| OTS-0500 | MTOR   | c.5395G>A | p.E1799K     |
| OTS-0501 | MTOR   | c.5930C>A | p.T1977K     |
| OTS-0502 | MTOR   | c.4379T>C | p.L1460P     |
| OTS-0503 | MTOR   | c.7280T>A | p.L2427Q     |
| OTS-0504 | MTOR   | c.7280T>G | p.L2427R     |
| OTS-0505 | MTOR   | c.6016G>T | p.V2006F     |
| OTS-0506 | MTOR   | c.7255G>A | p.E2419K     |
| OTS-0507 | MTOR   | c.5930C>G | p.T1977R     |
| OTS-0508 | MTOR   | c.5930C>T | p.T1977I     |
| OTS-0509 | MTOR   | c.5553C>T | p.S1851=     |
| OTS-0510 | MTOR   | c.6909G>A | p.L2303=     |
| OTS-0511 | MYC    | c.77A>G   | p.N26S       |
| OTS-0512 | MYC    | c.482C>T  | p.S161L      |
| OTS-0513 | MYC    | c.221C>T  | p.P74L       |
| OTS-0514 | MYCN   | c.131C>T  | p.P44L       |
| OTS-0515 | MYCN   | c.1333G>A | p.E445K      |
| OTS-0516 | MYCN   | c.1118G>A | p.R373Q      |
| OTS-0517 | MYCN   | c.904C>T  | p.R302C      |
| OTS-0518 | MYD88  | c.818T>C  | p.L273P      |
| OTS-0519 | NF2    | c.169C>T  | p.R57X       |
| OTS-0520 | NF2    | c.1021C>T | p.R341X      |
| OTS-0521 | NFE2L2 | c.235G>C  | p.E79Q       |
| OTS-0522 | NFE2L2 | c.85G>C   | p.D29H       |
| OTS-0523 | NFE2L2 | c.101G>A  | p.R34Q       |
| OTS-0524 | NFE2L2 | c.235G>A  | p.E79K       |
| OTS-0525 | NFE2L2 | c.100C>G  | p.R34G       |
| OTS-0526 | NFE2L2 | c.86A>G   | p.D29G       |
| OTS-0527 | NFE2L2 | c.246A>T  | p.E82D       |
| OTS-0528 | NFE2L2 | c.101G>C  | p.R34P       |
| OTS-0529 | NFE2L2 | c.230A>G  | p.D77G       |
| OTS-0530 | NFE2L2 | c.88C>T   | p.L30F       |
| OTS-0531 | NFE2L2 | c.92G>C   | p.G31A       |
| OTS-0532 | NFE2L2 | c.92G>A   | p.G31E       |
| OTS-0533 | NFE2L2 | c.245A>G  | p.E82G       |
| OTS-0534 | NFE2L2 | c.246A>C  | p.E82D       |
| OTS-0535 | NFE2L2 | c.85G>A   | p.D29N       |
| OTS-0536 | NFE2L2 | c.242G>A  | p.G81D       |

**OTS-Numbers: OTS-1000ex**

| OTS-No   | Gene          | CDS            | AA           |
|----------|---------------|----------------|--------------|
| OTS-0537 | <i>NFE2L2</i> | c.244G>C       | p.E82Q       |
| OTS-0538 | <i>NFE2L2</i> | c.70T>C        | p.W24R       |
| OTS-0539 | <i>NFE2L2</i> | c.72G>C        | p.W24C       |
| OTS-0540 | <i>NFE2L2</i> | c.83T>C        | p.I28T       |
| OTS-0541 | <i>NFE2L2</i> | c.89T>G        | p.L30R       |
| OTS-0542 | <i>NFE2L2</i> | c.1495C>T      | p.R499W      |
| OTS-0543 | <i>NFE2L2</i> | c.230A>T       | p.D77V       |
| OTS-0544 | <i>NFE2L2</i> | c.241G>A       | p.G81S       |
| OTS-0545 | <i>NFE2L2</i> | c.242G>T       | p.G81V       |
| OTS-0546 | <i>NFE2L2</i> | c.85G>T        | p.D29Y       |
| OTS-0547 | <i>NFE2L2</i> | c.239G>A       | p.T80K       |
| OTS-0548 | <i>NFE2L2</i> | c.239C>G       | p.T80R       |
| OTS-0549 | <i>NFE2L2</i> | c.80A>G        | p.D27G       |
| OTS-0550 | <i>NFE2L2</i> | c.91G>A        | p.G31R       |
| OTS-0551 | <i>NFE2L2</i> | c.238A>C       | p.T80P       |
| OTS-0552 | <i>NFE2L2</i> | c.238A>G       | p.T80A       |
| OTS-0553 | <i>NFE2L2</i> | c.241G>C       | p.G81R       |
| OTS-0554 | <i>NFE2L2</i> | c.1705C>T      | p.R569C      |
| OTS-0555 | <i>NFE2L2</i> | c.229G>C       | p.D77H       |
| OTS-0556 | <i>NFE2L2</i> | c.236A>G       | p.E79G       |
| OTS-0557 | <i>NFE2L2</i> | c.245A>T       | p.E82V       |
| OTS-0558 | <i>NFE2L2</i> | c.68T>G        | p.L23R       |
| OTS-0559 | <i>NFE2L2</i> | c.76C>A        | p.Q26K       |
| OTS-0560 | <i>NFE2L2</i> | c.79G>T        | p.D27Y       |
| OTS-0561 | <i>NFE2L2</i> | c.95T>G        | p.V32G       |
| OTS-0562 | <i>NFE2L2</i> | c.101G>T       | p.R34L       |
| OTS-0563 | <i>NFE2L2</i> | c.1706G>A      | p.R569H      |
| OTS-0564 | <i>NFE2L2</i> | c.229G>T       | p.D77Y       |
| OTS-0565 | <i>NFE2L2</i> | c.236A>T       | p.E79V       |
| OTS-0566 | <i>NFE2L2</i> | c.239C>T       | p.T80I       |
| OTS-0567 | <i>NFE2L2</i> | c.241G>T       | p.G81C       |
| OTS-0568 | <i>NFE2L2</i> | c.77A>C        | p.Q26P       |
| OTS-0569 | <i>NFE2L2</i> | c.92G>T        | p.G31V       |
| OTS-0570 | <i>NFE2L2</i> | c.235G>T       | p.E79X       |
| OTS-0571 | <i>NOTCH1</i> | c.7541_7542del | p.P2514Rfs*4 |
| OTS-0572 | <i>NRAS</i>   | c.182A>G       | p.Q61R       |
| OTS-0573 | <i>NRAS</i>   | c.181C>A       | p.Q61K       |
| OTS-0574 | <i>NRAS</i>   | c.35G>A        | p.G12D       |
| OTS-0575 | <i>NRAS</i>   | c.38G>A        | p.G13D       |
| OTS-0576 | <i>NRAS</i>   | c.182A>T       | p.Q61L       |
| OTS-0577 | <i>NRAS</i>   | c.34G>A        | p.G12S       |
| OTS-0578 | <i>NRAS</i>   | c.34G>T        | p.G12C       |
| OTS-0579 | <i>NRAS</i>   | c.37G>C        | p.G13R       |
| OTS-0580 | <i>NRAS</i>   | c.183A>T       | p.Q61H       |
| OTS-0581 | <i>NRAS</i>   | c.35G>T        | p.G12V       |
| OTS-0582 | <i>NRAS</i>   | c.35G>C        | p.G12A       |
| OTS-0583 | <i>NRAS</i>   | c.38G>T        | p.G13V       |
| OTS-0584 | <i>NRAS</i>   | c.183A>C       | p.Q61H       |
| OTS-0585 | <i>NRAS</i>   | c.34G>C        | p.G12R       |
| OTS-0586 | <i>NT5C2</i>  | c.1100G>A      | p.R367Q      |
| OTS-0587 | <i>PBRM1</i>  | c.2128C>T      | p.R710X      |
| OTS-0588 | <i>PBRM1</i>  | c.2211A>G      | p.T737=      |
| OTS-0589 | <i>PBRM1</i>  | c.4335A>G      | p.P1445=     |
| OTS-0590 | <i>PBRM1</i>  | c.3522A>T      | p.P1174=     |
| OTS-0591 | <i>PIK3CA</i> | c.3140A>G      | p.H1047R     |
| OTS-0592 | <i>PIK3CA</i> | c.1633G>A      | p.E545K      |
| OTS-0593 | <i>PIK3CA</i> | c.1624G>A      | p.E542K      |
| OTS-0594 | <i>PIK3CA</i> | c.3140A>T      | p.H1047L     |
| OTS-0595 | <i>PIK3CA</i> | c.1636C>A      | p.Q546K      |
| OTS-0596 | <i>PIK3CA</i> | c.263G>A       | p.R88Q       |
| OTS-0597 | <i>PIK3CA</i> | c.1035T>A      | p.N345K      |
| OTS-0598 | <i>PIK3CA</i> | c.1634A>G      | p.E545G      |
| OTS-0599 | <i>PIK3CA</i> | c.1258T>C      | p.C420R      |
| OTS-0600 | <i>PIK3CA</i> | c.2176G>A      | p.E726K      |
| OTS-0601 | <i>PIK3CA</i> | c.1637A>G      | p.Q546R      |
| OTS-0602 | <i>PIK3CA</i> | c.3139C>T      | p.H1047Y     |
| OTS-0603 | <i>PIK3CA</i> | c.241G>A       | p.E81K       |

| OTS-No   | Gene          | CDS       | AA       |
|----------|---------------|-----------|----------|
| OTS-0604 | <i>PIK3CA</i> | c.3145G>C | p.G1049R |
| OTS-0605 | <i>PIK3CA</i> | c.3129G>T | p.M1043I |
| OTS-0606 | <i>PIK3CA</i> | c.353G>A  | p.G118D  |
| OTS-0607 | <i>PIK3CA</i> | c.1357G>A | p.E453K  |
| OTS-0608 | <i>PIK3CA</i> | c.1633G>C | p.E545Q  |
| OTS-0609 | <i>PIK3CA</i> | c.3127A>G | p.M1043V |
| OTS-0610 | <i>PIK3CA</i> | c.323G>A  | p.R108H  |
| OTS-0611 | <i>PIK3CA</i> | c.3062A>G | p.Y1021C |
| OTS-0612 | <i>PIK3CA</i> | c.277C>T  | p.R93W   |
| OTS-0613 | <i>PIK3CA</i> | c.331A>G  | p.K111E  |
| OTS-0614 | <i>PIK3CA</i> | c.3129G>A | p.M1043I |
| OTS-0615 | <i>PIK3CA</i> | c.3073A>G | p.T1025A |
| OTS-0616 | <i>PIK3CA</i> | c.1637A>C | p.Q546P  |
| OTS-0617 | <i>PIK3CA</i> | c.317G>T  | p.G106V  |
| OTS-0618 | <i>PIK3CA</i> | c.113G>A  | p.R38H   |
| OTS-0619 | <i>PIK3CA</i> | c.1616C>G | p.P539R  |
| OTS-0620 | <i>PIK3CA</i> | c.278G>A  | p.R93Q   |
| OTS-0621 | <i>PIK3CA</i> | c.1030G>A | p.V344M  |
| OTS-0622 | <i>PIK3CA</i> | c.3145G>A | p.G1049S |
| OTS-0623 | <i>PIK3CA</i> | c.3132T>A | p.N1044K |
| OTS-0624 | <i>PIK3CA</i> | c.1031T>G | p.V344G  |
| OTS-0625 | <i>PIK3CA</i> | c.1093G>A | p.E365K  |
| OTS-0626 | <i>PIK3CA</i> | c.112C>T  | p.R38C   |
| OTS-0627 | <i>PIK3CA</i> | c.1635G>T | p.E545D  |
| OTS-0628 | <i>PIK3CA</i> | c.1624G>C | p.E542Q  |
| OTS-0629 | <i>PIK3CA</i> | c.1638G>T | p.Q546H  |
| OTS-0630 | <i>PIK3CA</i> | c.1252G>A | p.E418K  |
| OTS-0631 | <i>PIK3CA</i> | c.1173A>G | p.I391M  |
| OTS-0632 | <i>PIK3CA</i> | c.1636C>G | p.Q546E  |
| OTS-0633 | <i>PIK3CA</i> | c.2702G>T | p.C901F  |
| OTS-0634 | <i>PIK3CA</i> | c.1635G>C | p.E545D  |
| OTS-0635 | <i>PIK3CA</i> | c.3019G>C | p.G1007R |
| OTS-0636 | <i>PIK3CA</i> | c.333G>T  | p.K111N  |
| OTS-0637 | <i>PIK3CA</i> | c.1357G>C | p.E453Q  |
| OTS-0638 | <i>PIK3CA</i> | c.1625A>T | p.E542V  |
| OTS-0639 | <i>PIK3CA</i> | c.311C>T  | p.P104L  |
| OTS-0640 | <i>PIK3CA</i> | c.2908G>A | p.E970K  |
| OTS-0641 | <i>PIK3CA</i> | c.3132T>G | p.N1044K |
| OTS-0642 | <i>PIK3CA</i> | c.1639G>A | p.E547K  |
| OTS-0643 | <i>PIK3CA</i> | c.316G>C  | p.G106R  |
| OTS-0644 | <i>PIK3CA</i> | c.3129G>C | p.M1043I |
| OTS-0645 | <i>PIK3CA</i> | c.1034A>T | p.N345I  |
| OTS-0646 | <i>PIK3CB</i> | c.3151G>A | p.E1051K |
| OTS-0647 | <i>PIK3CB</i> | c.3200A>T | p.D1067V |
| OTS-0648 | <i>PIK3CB</i> | c.962G>A  | p.R321Q  |
| OTS-0649 | <i>PIK3CB</i> | c.1408G>A | p.E470K  |
| OTS-0650 | <i>PIK3CB</i> | c.1654G>A | p.E552K  |
| OTS-0651 | <i>PIK3CD</i> | c.1558T>G | p.S520A  |
| OTS-0652 | <i>PIK3CD</i> | c.3061G>A | p.E1021K |
| OTS-0653 | <i>PIK3CD</i> | c.2503G>A | p.A835T  |
| OTS-0654 | <i>PIK3CD</i> | c.113G>A  | p.R38H   |
| OTS-0655 | <i>PIK3CD</i> | c.262C>T  | p.R88C   |
| OTS-0656 | <i>PIK3CG</i> | c.2569A>G | p.T857A  |
| OTS-0657 | <i>PIK3CG</i> | c.1565A>G | p.N522S  |
| OTS-0658 | <i>PIK3CG</i> | c.1325C>A | p.S442Y  |
| OTS-0659 | <i>PIK3CG</i> | c.493G>A  | p.V165I  |
| OTS-0660 | <i>PIK3CG</i> | c.2275G>A | p.V759I  |
| OTS-0661 | <i>PIK3CG</i> | c.799G>A  | p.E267K  |
| OTS-0662 | <i>PIK3R1</i> | c.1690A>G | p.N564D  |
| OTS-0663 | <i>PIK3R1</i> | c.978G>A  | p.M326I  |
| OTS-0664 | <i>PIK3R1</i> | c.1042C>T | p.R348X  |
| OTS-0665 | <i>PIK3R1</i> | c.1699A>G | p.K567E  |
| OTS-0666 | <i>PIK3R1</i> | c.1126G>A | p.G376R  |
| OTS-0667 | <i>PIK3R1</i> | c.1381C>T | p.R461X  |
| OTS-0668 | <i>PIK3R1</i> | c.1924C>T | p.R642X  |
| OTS-0669 | <i>PIK3R1</i> | c.1072C>T | p.R358X  |
| OTS-0670 | <i>PIK3R2</i> | c.937T>C  | p.S313P  |

**OTS-Numbers: OTS-1000ex**

| OTS-No   | Gene           | CDS          | AA           |
|----------|----------------|--------------|--------------|
| OTS-0671 | <i>PIK3R2</i>  | c.1117G>A    | p.G373R      |
| OTS-0672 | <i>PIK3R2</i>  | c.1669G>T    | p.D557Y      |
| OTS-0673 | <i>PMS2</i>    | c.1866G>A    | p.M622I      |
| OTS-0674 | <i>PMS2</i>    | c.1531A>G    | p.T511A      |
| OTS-0675 | <i>PMS2</i>    | c.1789A>T    | p.T597S      |
| OTS-0676 | <i>PMS2</i>    | c.2570G>C    | p.G857A      |
| OTS-0677 | <i>POLE</i>    | c.857C>G     | p.P286R      |
| OTS-0678 | <i>POLE</i>    | c.1231G>T    | p.V411L      |
| OTS-0679 | <i>POLE</i>    | c.1231G>C    | p.V411L      |
| OTS-0680 | <i>PPP2R1A</i> | c.547C>T     | p.R183W      |
| OTS-0681 | <i>PPP2R1A</i> | c.536C>G     | p.P179R      |
| OTS-0682 | <i>PPP2R1A</i> | c.767C>T     | p.S256F      |
| OTS-0683 | <i>PPP2R1A</i> | c.548G>A     | p.R183Q      |
| OTS-0684 | <i>PPP2R1A</i> | c.544C>T     | p.R182W      |
| OTS-0685 | <i>PTEN</i>    | c.389G>A     | p.R130Q      |
| OTS-0686 | <i>PTEN</i>    | c.388C>G     | p.R130G      |
| OTS-0687 | <i>PTEN</i>    | c.955_958del | p.T319X      |
| OTS-0688 | <i>PTEN</i>    | c.697C>T     | p.R233X      |
| OTS-0689 | <i>PTEN</i>    | c.388C>T     | p.R130X      |
| OTS-0690 | <i>PTEN</i>    | c.800del     | p.K267RfsX9  |
| OTS-0691 | <i>PTEN</i>    | c.968del     | p.N323MfsX21 |
| OTS-0692 | <i>PTEN</i>    | c.517C>T     | p.R173C      |
| OTS-0693 | <i>PTEN</i>    | c.518G>A     | p.R173H      |
| OTS-0694 | <i>PTEN</i>    | c.1003C>T    | p.R335X      |
| OTS-0695 | <i>PTEN</i>    | c.511C>T     | p.Q171X      |
| OTS-0696 | <i>PTEN</i>    | c.733C>T     | p.Q245X      |
| OTS-0697 | <i>PTEN</i>    | c.19G>T      | p.E7X        |
| OTS-0698 | <i>PTEN</i>    | c.389G>T     | p.R130L      |
| OTS-0699 | <i>PTEN</i>    | c.640C>T     | p.Q214X      |
| OTS-0700 | <i>PTEN</i>    | c.406T>C     | p.C136R      |
| OTS-0701 | <i>PTEN</i>    | c.49C>T      | p.Q17X       |
| OTS-0702 | <i>PTEN</i>    | c.892C>T     | p.Q298X      |
| OTS-0703 | <i>PTEN</i>    | c.278A>G     | p.H93R       |
| OTS-0704 | <i>PTEN</i>    | c.395G>A     | p.G132D      |
| OTS-0705 | <i>PTEN</i>    | c.895G>T     | p.E299X      |
| OTS-0706 | <i>PTEN</i>    | c.202T>C     | p.Y68H       |
| OTS-0707 | <i>PTEN</i>    | c.112C>T     | p.P38S       |
| OTS-0708 | <i>PTEN</i>    | c.376G>A     | p.A126T      |
| OTS-0709 | <i>PTEN</i>    | c.424C>T     | p.R142W      |
| OTS-0710 | <i>PTEN</i>    | c.182A>G     | p.H61R       |
| OTS-0711 | <i>PTEN</i>    | c.385G>A     | p.G129R      |
| OTS-0712 | <i>PTEN</i>    | c.389G>C     | p.R130P      |
| OTS-0713 | <i>PTEN</i>    | c.686C>G     | p.S229X      |
| OTS-0714 | <i>PTEN</i>    | c.834C>G     | p.F278L      |
| OTS-0715 | <i>PTEN</i>    | c.407G>A     | p.C136Y      |
| OTS-0716 | <i>PTEN</i>    | c.493G>A     | p.G165R      |
| OTS-0717 | <i>PTEN</i>    | c.737C>T     | p.P246L      |
| OTS-0718 | <i>PTEN</i>    | c.302T>C     | p.I101T      |
| OTS-0719 | <i>PTEN</i>    | c.464A>G     | p.Y155C      |
| OTS-0720 | <i>PTEN</i>    | c.276C>A     | p.D92E       |
| OTS-0721 | <i>PTEN</i>    | c.386G>A     | p.G129E      |
| OTS-0722 | <i>PTEN</i>    | c.1021T>G    | p.F341V      |
| OTS-0723 | <i>PTEN</i>    | c.103A>G     | p.M35V       |
| OTS-0724 | <i>PTEN</i>    | c.106G>A     | p.G36R       |
| OTS-0725 | <i>PTEN</i>    | c.367C>T     | p.H123Y      |
| OTS-0726 | <i>PTEN</i>    | c.370T>A     | p.C124S      |
| OTS-0727 | <i>PTEN</i>    | c.380G>A     | p.G127E      |
| OTS-0728 | <i>PTEN</i>    | c.376G>T     | p.A126S      |
| OTS-0729 | <i>PTEN</i>    | c.380G>T     | p.G127V      |
| OTS-0730 | <i>PTEN</i>    | c.445C>T     | p.Q149X      |
| OTS-0731 | <i>PTEN</i>    | c.477G>T     | p.R159S      |
| OTS-0732 | <i>PTEN</i>    | c.494G>A     | p.G165E      |
| OTS-0733 | <i>PTPN11</i>  | c.226G>A     | p.E76K       |
| OTS-0734 | <i>PTPN11</i>  | c.215C>T     | p.A72V       |
| OTS-0735 | <i>PTPN11</i>  | c.214G>A     | p.A72T       |
| OTS-0736 | <i>PTPN11</i>  | c.181G>T     | p.D61Y       |
| OTS-0737 | <i>PTPN11</i>  | c.182A>T     | p.D61V       |

| OTS-No   | Gene           | CDS       | AA       |
|----------|----------------|-----------|----------|
| OTS-0738 | <i>PTPN11</i>  | c.179G>T  | p.G60V   |
| OTS-0739 | <i>PTPN11</i>  | c.205G>A  | p.E69K   |
| OTS-0740 | <i>RAC1</i>    | c.85C>T   | p.P29S   |
| OTS-0741 | <i>RAC1</i>    | c.533C>T  | p.A178V  |
| OTS-0742 | <i>RAC1</i>    | c.86C>T   | p.P29L   |
| OTS-0743 | <i>RAF1</i>    | c.770C>T  | p.S257L  |
| OTS-0744 | <i>RAF1</i>    | c.776C>T  | p.S259F  |
| OTS-0745 | <i>RB1</i>     | c.1735C>T | p.R579X  |
| OTS-0746 | <i>RB1</i>     | c.751C>T  | p.R251X  |
| OTS-0747 | <i>RB1</i>     | c.958C>T  | p.R320X  |
| OTS-0748 | <i>RB1</i>     | c.1363G>T | p.R455X  |
| OTS-0749 | <i>RB1</i>     | c.1654C>T | p.R552X  |
| OTS-0750 | <i>RB1</i>     | c.1666C>T | p.R556X  |
| OTS-0751 | <i>RB1</i>     | c.1072C>T | p.R358X  |
| OTS-0752 | <i>RB1</i>     | c.2359C>T | p.R787X  |
| OTS-0753 | <i>RB1</i>     | c.1333C>T | p.R445X  |
| OTS-0754 | <i>RET</i>     | c.2753T>C | p.M918T  |
| OTS-0755 | <i>RET</i>     | c.135A>G  | p.A45=   |
| OTS-0756 | <i>RET</i>     | c.2307G>T | p.L769=  |
| OTS-0757 | <i>RHOA</i>    | c.50G>T   | p.G17V   |
| OTS-0758 | <i>RHOA</i>    | c.50G>A   | p.G17E   |
| OTS-0759 | <i>RHOA</i>    | c.125A>G  | p.Y42C   |
| OTS-0760 | <i>RHOA</i>    | c.14G>A   | p.R5Q    |
| OTS-0761 | <i>RHOA</i>    | c.46T>C   | p.C16R   |
| OTS-0762 | <i>RHOA</i>    | c.139G>A  | p.E47K   |
| OTS-0763 | <i>RHOA</i>    | c.13C>T   | p.R5W    |
| OTS-0764 | <i>RHOA</i>    | c.185G>A  | p.G62E   |
| OTS-0765 | <i>RHOA</i>    | c.482C>T  | p.A161V  |
| OTS-0766 | <i>RNF43</i>   | c.433C>T  | p.R145X  |
| OTS-0767 | <i>ROS1</i>    | c.433A>C  | p.T145P  |
| OTS-0768 | <i>ROS1</i>    | c.6637G>A | p.D2213N |
| OTS-0769 | <i>ROS1</i>    | c.6686C>G | p.S2229C |
| OTS-0770 | <i>ROS1</i>    | c.6682A>C | p.K2228Q |
| OTS-0771 | <i>ROS1</i>    | c.500G>A  | p.R167Q  |
| OTS-0772 | <i>RXRA</i>    | c.1280C>T | p.S427F  |
| OTS-0773 | <i>RXRA</i>    | c.1280C>A | p.S427Y  |
| OTS-0774 | <i>SF3B1</i>   | c.2098A>G | p.K700E  |
| OTS-0775 | <i>SF3B1</i>   | c.1874G>A | p.R625H  |
| OTS-0776 | <i>SF3B1</i>   | c.1873C>T | p.R625C  |
| OTS-0777 | <i>SF3B1</i>   | c.2225G>A | p.G742D  |
| OTS-0778 | <i>SF3B1</i>   | c.1998G>C | p.K666N  |
| OTS-0779 | <i>SF3B1</i>   | c.1997A>C | p.K666T  |
| OTS-0780 | <i>SMAD2</i>   | c.1391C>G | p.S464X  |
| OTS-0781 | <i>SMAD2</i>   | c.544C>T  | p.R182X  |
| OTS-0782 | <i>SMAD4</i>   | c.1082G>A | p.R361H  |
| OTS-0783 | <i>SMAD4</i>   | c.1081C>T | p.R361C  |
| OTS-0784 | <i>SMAD4</i>   | c.1333C>T | p.R445X  |
| OTS-0785 | <i>SMAD4</i>   | c.353C>T  | p.A118V  |
| OTS-0786 | <i>SMAD4</i>   | c.403C>T  | p.R135X  |
| OTS-0787 | <i>SMAD4</i>   | c.1051G>C | p.D351H  |
| OTS-0788 | <i>SMAD4</i>   | c.1157G>A | p.G386D  |
| OTS-0789 | <i>SMAD4</i>   | c.1067C>T | p.P356L  |
| OTS-0790 | <i>SMAD4</i>   | c.988G>A  | p.E330K  |
| OTS-0791 | <i>SMAD4</i>   | c.1487G>A | p.R496H  |
| OTS-0792 | <i>SMARCA4</i> | c.2729C>T | p.T910M  |
| OTS-0793 | <i>SMARCA4</i> | c.3727C>T | p.R1243W |
| OTS-0794 | <i>SMARCA4</i> | c.3575G>A | p.R1192H |
| OTS-0795 | <i>SMARCA4</i> | c.3694G>A | p.G1232S |
| OTS-0796 | <i>SMARCA4</i> | c.3574C>T | p.R1192C |
| OTS-0797 | <i>SMARCA4</i> | c.2461G>A | p.E821K  |
| OTS-0798 | <i>SMARCA4</i> | c.3566G>A | p.R1189Q |
| OTS-0799 | <i>SMARCA4</i> | c.3469C>T | p.R1157W |
| OTS-0800 | <i>SMARCA4</i> | c.2653C>T | p.R885C  |
| OTS-0801 | <i>SMARCA4</i> | c.2758G>A | p.E920K  |
| OTS-0802 | <i>SMARCA4</i> | c.2738C>T | p.P913L  |
| OTS-0803 | <i>SMARCA4</i> | c.3403C>T | p.R1135W |
| OTS-0804 | <i>SPOP</i>    | c.399C>G  | p.F133L  |

**OTS-Numbers: OTS-1000ex**

| OTS-No   | Gene                     | CDS       | AA       |
|----------|--------------------------|-----------|----------|
| OTS-0805 | <i>SPOP</i>              | c.397T>G  | p.F133V  |
| OTS-0806 | <i>SPOP</i>              | c.305T>G  | p.F102C  |
| OTS-0807 | <i>SPOP</i>              | c.391T>G  | p.W131G  |
| OTS-0808 | <i>SPOP</i>              | c.260A>G  | p.Y87C   |
| OTS-0809 | <i>SPOP</i>              | c.399C>A  | p.F133L  |
| OTS-0810 | <i>SPOP</i>              | c.304T>G  | p.F102V  |
| OTS-0811 | <i>SPOP</i>              | c.349A>G  | p.M117V  |
| OTS-0812 | <i>SPOP</i>              | c.398T>C  | p.F133S  |
| OTS-0813 | <i>SPOP</i>              | c.232G>A  | p.E78K   |
| OTS-0814 | <i>SPOP</i>              | c.259T>A  | p.Y87N   |
| OTS-0815 | <i>SPOP</i>              | c.398T>G  | p.F133C  |
| OTS-0816 | <i>SPOP</i>              | c.393G>C  | p.W131C  |
| OTS-0817 | <i>SPOP</i>              | c.362G>A  | p.R121Q  |
| OTS-0818 | <i>SPOP</i>              | c.388G>C  | p.D130H  |
| OTS-0819 | <i>SRSF2</i>             | c.284C>A  | p.P95H   |
| OTS-0820 | <i>SRSF2</i>             | c.284C>T  | p.P95L   |
| OTS-0821 | <i>STAG2</i>             | c.646C>T  | p.R216X  |
| OTS-0822 | <i>STAG2</i>             | c.775C>T  | p.R259X  |
| OTS-0823 | <i>STAG2</i>             | c.3034C>T | p.R1012X |
| OTS-0824 | <i>STAT3</i>             | c.1919A>T | p.Y640F  |
| OTS-0825 | <i>STAT3</i>             | c.1981G>T | p.D661Y  |
| OTS-0826 | <i>STAT3</i>             | c.1852G>C | p.G618R  |
| OTS-0827 | <i>STAT3</i>             | c.1940A>T | p.N647I  |
| OTS-0828 | <i>STK11</i>             | c.1062C>G | p.F354L  |
| OTS-0829 | <i>STK11</i>             | c.109C>T  | p.Q37X   |
| OTS-0830 | <i>STK11</i>             | c.580G>T  | p.D194Y  |
| OTS-0831 | <i>STK11</i>             | c.647C>T  | p.S216F  |
| OTS-0832 | <i>STK11</i>             | c.667G>T  | p.E223X  |
| OTS-0833 | <i>TERT</i> <sub>p</sub> | C228T     | NA       |
| OTS-0834 | <i>TERT</i> <sub>p</sub> | C250T     | NA       |
| OTS-0835 | <i>TET2</i>              | c.1648C>T | p.R550X  |
| OTS-0836 | <i>TET2</i>              | c.4393C>T | p.R1465X |
| OTS-0837 | <i>TP53</i>              | c.524G>A  | p.R175H  |
| OTS-0838 | <i>TP53</i>              | c.743G>A  | p.R248Q  |
| OTS-0839 | <i>TP53</i>              | c.818G>A  | p.R273H  |
| OTS-0840 | <i>TP53</i>              | c.817C>T  | p.R273C  |
| OTS-0841 | <i>TP53</i>              | c.742C>T  | p.R248W  |
| OTS-0842 | <i>TP53</i>              | c.844C>T  | p.R282W  |
| OTS-0843 | <i>TP53</i>              | c.637C>T  | p.R213X  |
| OTS-0844 | <i>TP53</i>              | c.733G>A  | p.G245S  |
| OTS-0845 | <i>TP53</i>              | c.747G>T  | p.R249S  |
| OTS-0846 | <i>TP53</i>              | c.659A>G  | p.Y220C  |
| OTS-0847 | <i>TP53</i>              | c.586C>T  | p.R196X  |
| OTS-0848 | <i>TP53</i>              | c.469G>T  | p.V157F  |
| OTS-0849 | <i>TP53</i>              | c.536A>G  | p.H179R  |
| OTS-0850 | <i>TP53</i>              | c.488A>G  | p.Y163C  |
| OTS-0851 | <i>TP53</i>              | c.527G>T  | p.C176F  |
| OTS-0852 | <i>TP53</i>              | c.818G>T  | p.R273L  |
| OTS-0853 | <i>TP53</i>              | c.853G>A  | p.E285K  |
| OTS-0854 | <i>TP53</i>              | c.734G>A  | p.G245D  |
| OTS-0855 | <i>TP53</i>              | c.722C>T  | p.S241F  |
| OTS-0856 | <i>TP53</i>              | c.578A>G  | p.H193R  |
| OTS-0857 | <i>TP53</i>              | c.535C>T  | p.H179Y  |
| OTS-0858 | <i>TP53</i>              | c.856G>A  | p.E286K  |
| OTS-0859 | <i>TP53</i>              | c.584T>C  | p.I195T  |
| OTS-0860 | <i>TP53</i>              | c.574C>T  | p.Q192X  |
| OTS-0861 | <i>TP53</i>              | c.701A>G  | p.Y234C  |
| OTS-0862 | <i>TP53</i>              | c.814G>A  | p.V272M  |
| OTS-0863 | <i>TP53</i>              | c.711G>A  | p.M237I  |
| OTS-0864 | <i>TP53</i>              | c.713G>A  | p.C238Y  |
| OTS-0865 | <i>TP53</i>              | c.743G>T  | p.R248L  |
| OTS-0866 | <i>TP53</i>              | c.473G>A  | p.R158H  |
| OTS-0867 | <i>TP53</i>              | c.646G>A  | p.V216M  |
| OTS-0868 | <i>TP53</i>              | c.832C>T  | p.P278S  |
| OTS-0869 | <i>TP53</i>              | c.422G>A  | p.C141Y  |
| OTS-0870 | <i>TP53</i>              | c.527G>A  | p.C176Y  |
| OTS-0871 | <i>TP53</i>              | c.455C>T  | p.P152L  |

| OTS-No   | Gene        | CDS      | AA      |
|----------|-------------|----------|---------|
| OTS-0872 | <i>TP53</i> | c.473G>T | p.R158L |
| OTS-0873 | <i>TP53</i> | c.725G>T | p.C242F |
| OTS-0874 | <i>TP53</i> | c.833C>T | p.P278L |
| OTS-0875 | <i>TP53</i> | c.614A>G | p.Y205C |
| OTS-0876 | <i>TP53</i> | c.641A>G | p.H214R |
| OTS-0877 | <i>TP53</i> | c.734G>T | p.G245V |
| OTS-0878 | <i>TP53</i> | c.451C>T | p.P151S |
| OTS-0879 | <i>TP53</i> | c.797G>A | p.G266E |
| OTS-0880 | <i>TP53</i> | c.839G>A | p.R280K |
| OTS-0881 | <i>TP53</i> | c.839G>C | p.R280T |
| OTS-0882 | <i>TP53</i> | c.707A>G | p.Y236C |
| OTS-0883 | <i>TP53</i> | c.733G>T | p.G245C |
| OTS-0884 | <i>TP53</i> | c.517G>T | p.V173L |
| OTS-0885 | <i>TP53</i> | c.404G>A | p.C135Y |
| OTS-0886 | <i>TP53</i> | c.581T>G | p.L194R |
| OTS-0887 | <i>TP53</i> | c.796G>A | p.G266R |
| OTS-0888 | <i>TP53</i> | c.517G>A | p.V173M |
| OTS-0889 | <i>TP53</i> | c.380C>T | p.S127F |
| OTS-0890 | <i>TP53</i> | c.395A>G | p.K132R |
| OTS-0891 | <i>TP53</i> | c.824G>A | p.C275Y |
| OTS-0892 | <i>TP53</i> | c.404G>T | p.C135F |
| OTS-0893 | <i>TP53</i> | c.730G>T | p.G244C |
| OTS-0894 | <i>TP53</i> | c.577C>T | p.H193Y |
| OTS-0895 | <i>TP53</i> | c.638G>T | p.R213L |
| OTS-0896 | <i>TP53</i> | c.749C>T | p.P250L |
| OTS-0897 | <i>TP53</i> | c.772G>A | p.E258K |
| OTS-0898 | <i>TP53</i> | c.578A>T | p.H193L |
| OTS-0899 | <i>TP53</i> | c.824G>T | p.C275F |
| OTS-0900 | <i>TP53</i> | c.736A>G | p.M246V |
| OTS-0901 | <i>TP53</i> | c.797G>T | p.G266V |
| OTS-0902 | <i>TP53</i> | c.476C>T | p.A159V |
| OTS-0903 | <i>TP53</i> | c.725G>A | p.C242Y |
| OTS-0904 | <i>TP53</i> | c.461G>T | p.G154V |
| OTS-0905 | <i>TP53</i> | c.481G>A | p.A161T |
| OTS-0906 | <i>TP53</i> | c.731G>A | p.G244D |
| OTS-0907 | <i>TP53</i> | c.638G>A | p.R213Q |
| OTS-0908 | <i>TP53</i> | c.713G>T | p.C238F |
| OTS-0909 | <i>TP53</i> | c.715A>G | p.N239D |
| OTS-0910 | <i>TP53</i> | c.406C>T | p.Q136X |
| OTS-0911 | <i>TP53</i> | c.493C>T | p.Q165X |
| OTS-0912 | <i>TP53</i> | c.536A>T | p.H179L |
| OTS-0913 | <i>TP53</i> | c.811G>A | p.E271K |
| OTS-0914 | <i>TP53</i> | c.437G>A | p.W146X |
| OTS-0915 | <i>TP53</i> | c.438G>A | p.W146X |
| OTS-0916 | <i>TP53</i> | c.592G>T | p.E198X |
| OTS-0917 | <i>TP53</i> | c.430C>T | p.Q144X |
| OTS-0918 | <i>TP53</i> | c.711G>T | p.M237I |
| OTS-0919 | <i>TP53</i> | c.730G>A | p.G244S |
| OTS-0920 | <i>TP53</i> | c.746G>T | p.R249M |
| OTS-0921 | <i>TP53</i> | c.610G>T | p.E204X |
| OTS-0922 | <i>TP53</i> | c.722C>G | p.S241C |
| OTS-0923 | <i>TP53</i> | c.329G>T | p.R110L |
| OTS-0924 | <i>TP53</i> | c.745A>T | p.R249W |
| OTS-0925 | <i>TP53</i> | c.814G>T | p.V272L |
| OTS-0926 | <i>TP53</i> | c.841G>C | p.D281H |
| OTS-0927 | <i>TP53</i> | c.396G>T | p.K132N |
| OTS-0928 | <i>TP53</i> | c.836G>A | p.G279E |
| OTS-0929 | <i>TP53</i> | c.838A>G | p.R280G |
| OTS-0930 | <i>TP53</i> | c.799C>T | p.R267W |
| OTS-0931 | <i>TP53</i> | c.830G>T | p.C277F |
| OTS-0932 | <i>TP53</i> | c.583A>T | p.I195F |
| OTS-0933 | <i>TP53</i> | c.832C>A | p.P278T |
| OTS-0934 | <i>TP53</i> | c.844C>G | p.R282G |
| OTS-0935 | <i>TP53</i> | c.452C>A | p.P151H |
| OTS-0936 | <i>TP53</i> | c.548C>G | p.S183X |
| OTS-0937 | <i>TP53</i> | c.569C>T | p.P190L |
| OTS-0938 | <i>TP53</i> | c.833C>G | p.P278R |

**OTS-Numbers: OTS-1000ex**

| OTS-No   | Gene | CDS      | AA      |
|----------|------|----------|---------|
| OTS-0939 | TP53 | c.396G>C | p.K132N |
| OTS-0940 | TP53 | c.475G>C | p.A159P |
| OTS-0941 | TP53 | c.499C>T | p.Q167X |
| OTS-0942 | TP53 | c.427G>A | p.V143M |
| OTS-0943 | TP53 | c.644G>T | p.S215I |
| OTS-0944 | TP53 | c.775G>T | p.D259Y |
| OTS-0945 | TP53 | c.700T>C | p.Y234H |
| OTS-0946 | TP53 | c.716A>G | p.N239S |
| OTS-0947 | TP53 | c.745A>G | p.R249G |
| OTS-0948 | TP53 | c.841G>A | p.D281N |
| OTS-0949 | TP53 | c.298C>T | p.Q100X |
| OTS-0950 | TP53 | c.310C>T | p.Q104X |
| OTS-0951 | TP53 | c.820G>T | p.V274F |
| OTS-0952 | TP53 | c.763A>T | p.I255F |
| OTS-0953 | TP53 | c.821T>C | p.V274A |
| OTS-0954 | TP53 | c.464C>A | p.T155N |
| OTS-0955 | TP53 | c.467G>C | p.R156P |
| OTS-0956 | TP53 | c.542G>A | p.R181H |
| OTS-0957 | TP53 | c.580C>T | p.L194F |
| OTS-0958 | TP53 | c.746G>C | p.R249T |
| OTS-0959 | TP53 | c.818G>C | p.R273P |
| OTS-0960 | TP53 | c.845G>A | p.R282Q |
| OTS-0961 | TP53 | c.772G>T | p.E258X |
| OTS-0962 | TP53 | c.405C>G | p.C135W |
| OTS-0963 | TP53 | c.541C>T | p.R181C |
| OTS-0964 | TP53 | c.832C>G | p.P278A |
| OTS-0965 | TP53 | c.856G>T | p.E286X |
| OTS-0966 | TP53 | c.329G>C | p.R110P |
| OTS-0967 | TP53 | c.514G>T | p.V172F |
| OTS-0968 | TP53 | c.584T>A | p.I195N |
| OTS-0969 | TP53 | c.511G>T | p.E171X |
| OTS-0970 | TP53 | c.811G>T | p.E271X |
| OTS-0971 | TP53 | c.523C>G | p.R175G |
| OTS-0972 | TP53 | c.747G>C | p.R249S |
| OTS-0973 | TP53 | c.375G>T | p.T125T |
| OTS-0974 | TP53 | c.394A>G | p.K132E |
| OTS-0975 | TP53 | c.487T>A | p.Y163N |
| OTS-0976 | TP53 | c.800G>C | p.R267P |
| OTS-0977 | TP53 | c.853G>T | p.E285X |
| OTS-0978 | TP53 | c.738G>A | p.M246I |
| OTS-0979 | TP53 | c.742C>G | p.R248G |
| OTS-0980 | TP53 | c.785G>T | p.G262V |
| OTS-0981 | TP53 | c.859G>T | p.E287X |
| OTS-0982 | TP53 | c.454C>T | p.P152S |
| OTS-0983 | TP53 | c.487T>C | p.Y163H |
| OTS-0984 | TP53 | c.524G>T | p.R175L |
| OTS-0985 | TP53 | c.725G>C | p.C242S |
| OTS-0986 | TP53 | c.794T>C | p.L265P |
| OTS-0987 | TP53 | c.839G>T | p.R280I |
| OTS-0988 | TP53 | c.848G>C | p.R283P |
| OTS-0989 | TP53 | c.375G>A | p.T125T |
| OTS-0990 | TP53 | c.388C>G | p.L130V |
| OTS-0991 | TP53 | c.528C>G | p.C176W |
| OTS-0992 | TP53 | c.535C>A | p.H179N |
| OTS-0993 | TP53 | c.596G>T | p.G199V |
| OTS-0994 | TP53 | c.643A>G | p.S215G |
| OTS-0995 | TP53 | c.722C>A | p.S241Y |
| OTS-0996 | TP53 | c.796G>T | p.G266X |
| OTS-0997 | TP53 | c.374C>T | p.T125M |
| OTS-0998 | TP53 | c.377A>G | p.Y126C |
| OTS-0999 | TP53 | c.517G>C | p.V173L |
| OTS-1000 | TP53 | c.523C>T | p.R175C |
| OTS-1001 | TP53 | c.530C>T | p.P177L |
| OTS-1002 | TP53 | c.817C>A | p.R273S |
| OTS-1003 | TP53 | c.434T>A | p.L145Q |
| OTS-1004 | TP53 | c.463A>C | p.T155P |
| OTS-1005 | TP53 | c.503A>G | p.H168R |


| OTS-No   | Gene | CDS       | AA      |
|----------|------|-----------|---------|
| OTS-1006 | TP53 | c.535C>G  | p.H179D |
| OTS-1007 | TP53 | c.658T>A  | p.Y220N |
| OTS-1008 | TP53 | c.700T>A  | p.Y234N |
| OTS-1009 | TP53 | c.743G>C  | p.R248P |
| OTS-1010 | TP53 | c.843C>G  | p.D281E |
| OTS-1011 | TP53 | c.380C>A  | p.S127Y |
| OTS-1012 | TP53 | c.472C>T  | p.R158C |
| OTS-1013 | TP53 | c.400T>C  | p.F134L |
| OTS-1014 | TP53 | c.412G>C  | p.A138P |
| OTS-1015 | TP53 | c.421T>C  | p.C141R |
| OTS-1016 | TP53 | c.473G>C  | p.R158P |
| OTS-1017 | TP53 | c.587G>C  | p.R196P |
| OTS-1018 | TP53 | c.706T>A  | p.Y236N |
| OTS-1019 | TP53 | c.526T>C  | p.C176R |
| OTS-1020 | TP53 | c.526T>A  | p.C176S |
| OTS-1021 | TP53 | c.537T>A  | p.H179Q |
| OTS-1022 | TP53 | c.542G>C  | p.R181P |
| OTS-1023 | TP53 | c.659A>C  | p.Y220S |
| OTS-1024 | TP53 | c.731G>T  | p.G244V |
| OTS-1025 | TP53 | c.733G>C  | p.G245R |
| OTS-1026 | TP53 | c.843C>A  | p.D281E |
| OTS-1027 | TP53 | c.845G>C  | p.R282P |
| OTS-1028 | TP53 | c.857A>G  | p.E286G |
| OTS-1029 | TP53 | c.661G>T  | p.E221X |
| OTS-1030 | TP53 | c.434T>C  | p.L145P |
| OTS-1031 | TP53 | c.451C>G  | p.P151A |
| OTS-1032 | TP53 | c.490A>G  | p.K164E |
| OTS-1033 | TP53 | c.613T>G  | p.Y205D |
| OTS-1034 | TP53 | c.718A>G  | p.S240G |
| OTS-1035 | TP53 | c.809T>C  | p.F270S |
| OTS-1036 | TP53 | c.808T>C  | p.F270L |
| OTS-1037 | TP53 | c.313G>T  | p.G105C |
| OTS-1038 | TP53 | c.388C>T  | p.L130F |
| OTS-1039 | TP53 | c.559G>A  | p.G187S |
| OTS-1040 | TP53 | c.623A>T  | p.D208V |
| OTS-1041 | TP53 | c.645T>G  | p.S215R |
| OTS-1042 | TP53 | c.658T>C  | p.Y220H |
| OTS-1043 | TP53 | c.796G>C  | p.G266R |
| OTS-1044 | TP53 | c.809T>G  | p.F270C |
| OTS-1045 | TP53 | c.823T>C  | p.C275R |
| OTS-1046 | TP53 | c.840A>T  | p.R280S |
| OTS-1047 | TP53 | c.841G>T  | p.D281Y |
| OTS-1048 | TP53 | c.847C>T  | p.R283C |
| OTS-1049 | TP53 | c.854A>T  | p.E285V |
| OTS-1050 | TP53 | c.328C>T  | p.R110C |
| OTS-1051 | TP53 | c.423C>G  | p.C141W |
| OTS-1052 | TP53 | c.451C>A  | p.P151T |
| OTS-1053 | TP53 | c.472C>G  | p.R158G |
| OTS-1054 | TP53 | c.518T>C  | p.V173A |
| OTS-1055 | TP53 | c.596G>A  | p.G199E |
| OTS-1056 | TP53 | c.755T>C  | p.L252P |
| OTS-1057 | TP53 | c.830G>A  | p.C277Y |
| OTS-1058 | TP53 | c.833C>A  | p.P278H |
| OTS-1059 | TP53 | c.842A>G  | p.D281G |
| OTS-1060 | TP53 | c.497C>G  | p.S166X |
| OTS-1061 | TP53 | c.395A>T  | p.K132M |
| OTS-1062 | TP53 | c.470T>G  | p.V157G |
| OTS-1063 | TP53 | c.530C>G  | p.P177R |
| OTS-1064 | TP53 | c.578A>C  | p.H193P |
| OTS-1065 | TP53 | c.632C>T  | p.T211I |
| OTS-1066 | TP53 | c.712T>C  | p.C238R |
| OTS-1067 | TP53 | c.916C>T  | p.R306X |
| OTS-1068 | TP53 | c.1024C>T | p.R342X |
| OTS-1069 | VHL  | c.481C>T  | p.R161X |
| OTS-1070 | VHL  | c.266T>A  | p.L89H  |
| OTS-1071 | VHL  | c.194C>A  | p.S65X  |
| OTS-1072 | VHL  | c.203C>A  | p.S68X  |



**OTS-Numbers: OTS-1000ex**

| OTS-No   | Gene | CDS       | AA      |
|----------|------|-----------|---------|
| OTS-1073 | VHL  | c.472C>G  | p.L158V |
| OTS-1074 | VHL  | c.194C>T  | p.S65L  |
| OTS-1075 | VHL  | c.484T>C  | p.C162R |
| OTS-1076 | VHL  | c.241C>T  | p.P81S  |
| OTS-1077 | VHL  | c.343C>A  | p.H115N |
| OTS-1078 | VHL  | c.343C>T  | p.H115Y |
| OTS-1079 | VHL  | c.506T>C  | p.L169P |
| OTS-1080 | VHL  | c.388G>C  | p.V130L |
| OTS-1081 | VHL  | c.240T>A  | p.S80R  |
| OTS-1082 | VHL  | c.233A>G  | p.N78S  |
| OTS-1083 | VHL  | c.239G>A  | p.S80N  |
| OTS-1084 | VHL  | c.221T>A  | p.V74D  |
| OTS-1085 | VHL  | c.263G>A  | p.W88X  |
| OTS-1086 | VHL  | c.286C>T  | p.Q96X  |
| OTS-1087 | VHL  | c.217C>T  | p.Q73X  |
| OTS-1088 | VHL  | c.499C>T  | p.R167W |
| OTS-1089 | VHL  | c.263G>T  | p.W88L  |
| OTS-1090 | VHL  | c.353T>C  | p.L118P |
| OTS-1091 | VHL  | c.361G>T  | p.D121Y |
| OTS-1092 | VHL  | c.208G>T  | p.E70X  |
| OTS-1093 | VHL  | c.266T>C  | p.L89P  |
| OTS-1094 | VHL  | c.269A>T  | p.N90I  |
| OTS-1095 | VHL  | c.332G>A  | p.S111N |
| OTS-1096 | VHL  | c.333C>A  | p.S111R |
| OTS-1097 | VHL  | c.452T>C  | p.I151T |
| OTS-1098 | VHL  | c.458T>C  | p.L153P |
| OTS-1099 | VHL  | c.525C>A  | p.Y175X |
| OTS-1100 | VHL  | c.256C>T  | p.P86S  |
| OTS-1101 | VHL  | c.383T>C  | p.L128P |
| OTS-1102 | VHL  | c.473T>A  | p.L158Q |
| OTS-1103 | VHL  | c.473T>C  | p.L158P |
| OTS-1104 | VHL  | c.490C>T  | p.Q164X |
| OTS-1105 | VHL  | c.551T>C  | p.L184P |
| OTS-1106 | VHL  | c.341G>C  | p.G114A |
| OTS-1107 | VHL  | c.350G>A  | p.W117X |
| OTS-1108 | WT1  | c.1142C>A | p.S381X |
| OTS-1109 | WT1  | c.1384C>T | p.R462W |
| OTS-1110 | WT1  | c.1372C>T | p.R458X |
| OTS-1111 | WT1  | c.1105C>T | p.R369X |
| OTS-1112 | WT1  | c.1385G>A | p.R462Q |
| OTS-1113 | WT1  | c.1107A>G | p.R369= |
| OTS-1114 | WT1  | c.594C>T  | p.N198= |
| OTS-1115 | XPO1 | c.1711G>A | p.E571K |
| OTS-1116 | XPO1 | c.2246G>A | p.R749Q |

**OTS-Probes**

|   |   |               |         |                             |         |                                     |          |
|---|---|---------------|---------|-----------------------------|---------|-------------------------------------|----------|
|  | <p>容器単位： 0.5mL自立型Oリングレスループスクリーキャップチューブ<br/>         使用方法： DNase/RNase-free distilled water を15μL 入れ、チューブの底部<br/>         および壁部に付着しているプライマー・プローブ混合物を溶解<br/>         蛍光色素： HEX (wild type), VIC (mutant type)<br/>         使用期限： 溶解後1年以内<br/>         保存方法： 未開封(乾燥品)： -20℃保存<br/>         開封溶解後： -20℃保存</p> |               |         |                             |         |                                     |          |
|   | <p>解析回数/チューブ：</p> <table border="1" style="width: 100%;"> <tr> <td>Bio-Rad QX200</td> <td>約6アッセイ分</td> </tr> <tr> <td>ThermoFisher QuantStudio 3D</td> <td>約8アッセイ分</td> </tr> <tr> <td>ThermoFisher QuantStudio Absolute Q</td> <td>約12アッセイ分</td> </tr> </table>  | Bio-Rad QX200 | 約6アッセイ分 | ThermoFisher QuantStudio 3D | 約8アッセイ分 | ThermoFisher QuantStudio Absolute Q | 約12アッセイ分 |
|   | Bio-Rad QX200   | 約6アッセイ分       |         |                             |         |                                     |          |
|   | ThermoFisher QuantStudio 3D   | 約8アッセイ分       |         |                             |         |                                     |          |
| ThermoFisher QuantStudio Absolute Q   | 約12アッセイ分  |               |         |                             |         |                                     |          |

\* 『OTS-Probes』は岩手医科大学医歯薬研究所が開発し特許化した技術の移転を受け、株式会社クオントディテクトが開発・製造したものです。