

## Supplementary Material

**Supplementary Figure S1** DNA sequence alignments of human, chimpanzee, gorilla and orangutan *FSHB* gene. Location of exons, identified SNPs and fixed differences among species causing non-synonymous changes are indicated

human 1 AAAAGAAAAGAATTTTATTTTTCTTTTCAGACAAAAATAGACTTTAAAATAATAATGGAA  
chimpanzee 1 .....  
gorilla 1 .....  
orangutan 1 .....


human 61 GAACAAATATGATGATCACAATTATCAGAGTAATTACTTTATGACAGTCAGCAATAAGAT  
chimpanzee 61 .....  
gorilla 61 .....T.....  
orangutan 61 .....C.....C.....

**rs 550312**

human 121 TCTAATCTTTAAATATTCCTCTGCTGAAATCATTATATTGGAGTTTTGATCTATAATATA  
chimpanzee 121 .....  
gorilla 121 .....  
orangutan 121 .....C.....  



human 181 TTCCCACCCTGACCCAAAAATTGAAGAAGGACAAGGAAAAATGTT-GTTCCAAGAAACAA  
chimpanzee 181 .....-.....  
gorilla 181 .....-.....  
orangutan 181 .....A.....A...G....T.....

**rs 611246**

human 240 AGATGTAAGTAAAAGGCATAAGGAAGGAAAAAAATCTTTTGAAGCAAAATGTGATTGAG  
chimpanzee 240 .....  
gorilla 237 ...C.....  
orangutan 241 ...C.....C.....  


human 300 GAGGATGAGCAGACCAATTATTTTTGGTTTTGGTCAGCTTACATAATGATTATCGTTCTTT  
chimpanzee 300 .....  
gorilla 297 .....T.....  
orangutan 300 .....

**exon 2**



human 360 GGTTTCTCAGTTTCTAGTGGGCTTCATTGTTTGCTTCCAGACCAGGATGAAGACACTCC  
chimpanzee 360 .....  
gorilla 357 .....  
orangutan 360 .....G.....  


**Leu (L)->Val (V)**

human 420 AGTTTTTCTTCCTTTTCTGTTGCTGGAAAGCAATCTGCTGCAATAGCTGTGAGCTGACCA  
chimpanzee 420 .....  
gorilla 417 .....  
orangutan 420 .....

human 480 ACATCACCATTGCAATAGAGAAAGAAGAATGTCGTTTCTGCATAAGCATCAACACCACTT  
chimpanzee 480 .....  
gorilla 477 .....  
orangutan 480 .....G.....

**rs 609896**

human 540 GGTGTGCTGGCTACTGCTACACCAGGCTAGGTACCATGTTTGTCTGGAAGCAAGGGTCT  
chimpanzee 540 .....C.....  
gorilla 537 .....  
orangutan 540 .....G.....  
  


**Tyr (Y)->His (H)**

human 600 GAAGGTCTGTATTAGGCCGGTTTTATTAGTTTCTACTTTATCAATATTTTATGTATTCTA  
chimpanzee 600 .....  
gorilla 597 .....C.....  
orangutan 600 .....

human	660	AGTAACAGCCATGAGTCCTTTAGCCAAGACTGTCTGTGTTGTGATTGGGGTTAATGACCA
chimpanzee	660	.....A...C.....
gorilla	657	.....
orangutan	660	.....C.....A.....
human	720	CGATATCACTTAGATGTTTGGGCTTGGATTTGATTTGGGTAAATTTAGGAAAGCCTCAGA
chimpanzee	720	T.....
gorilla	717	T.....
orangutan	720	T.....G
human	780	TTTAATCTGATCAATTTGGTACTAGTCCAACCTTGCATCTACAGGGAAAAAGTATTTCTA
chimpanzee	777	.....T.....
gorilla	777	.....T.....A.....
orangutan	780	...C.....A.....T.....A.....
human	840	TGTTACGTTTTTACACATAGAGAGATAAACATGGAAACATACATATATTTAATCATAAAG
chimpanzee	837	.....T.....
gorilla	837	.....T.....
orangutan	840	.....T.....T.....C.....
human	900	GACCTATAATATTCTCATAAAGGCAATTTCTTTAACTGACACTACATCTTTGACACAAAA
chimpanzee	897	.....C.....
gorilla	897	.....
orangutan	900	.....C.G.....TG.....
human	960	ATCACACCAAAATATGTCTCCAAGTCACATAAAAAACATAGACAGCCACTTAAAAAATTG
chimpanzee	957	.....C.....T.....
gorilla	957	.....C.....
orangutan	960	...T.....C.....C.....
human	1019	TCTTCCTGGCCCTACTAAATACAAATGCCAAAAAACAGCCTGAGAACACAATCAATTCTT
chimpanzee	1017	.....
gorilla	1017	.....
orangutan	1020	.....C...T.....
human	1079	GCAGACTGTTAGAACAAAAATGAATCAGCAAACCCACTCCCTTCGTTATAGCATTGAGAA
chimpanzee	1077	.....A.....
gorilla	1077	.....
orangutan	1080	.....A.....
human	1139	AACCAAGACATAGAGGCATCAGTTGCTAGTCTGTGTTTGCAGTTTCCTTGCATTAATACA
chimpanzee	1137	.....
gorilla	1137	.....
orangutan	1140	.....
		<b>rs 580646</b>
human	1199	AGTAGAGAAATAGTTTCCATGGTGTCTCTTTTTTCTCTGCAGCACCCCTAATTATCTAT
chimpanzee	1197	.....
gorilla	1197	.....A.....
orangutan	1200	...A.....
human	1259	GCAGAATTTTATTCTATAAACTAAAATTGAAAATGGCAACTTTTTAAATGAACGATACTT
chimpanzee	1257	.....T...-.....
gorilla	1257	.....C.....
orangutan	1260	.....G.....C.....T.....

human 1319 TATTTGACGGTAAATGAGTTTGATCAAACCTCCATTTATTACACAATTTATTGCACCTTCT  
chimpanzee 1316 .....  
gorilla 1317 .....  
orangutan 1320 C.....T.....

human 1379 TGGGATATACATTTGGTAGGATGATATTAATAAATAAACAGAAGCCCCAATTTCTCTACGCA  
chimpanzee 1376 .....G.....  
gorilla 1377 .....C.....T.....  
orangutan 1380 .....C.....C.....T..T..

human 1439 GTATAAATAATTTTTCCACTGGAAAGTGCTACTACAAATAATTTCTACCTGGATTAAAAA  
chimpanzee 1436 .....G.....C.....  
gorilla 1437 A.....A.....  
orangutan 1440 .C.....G.....C.....

**rs 595496**

human 1499 TTCTTATA**T**GCAAACCTGCATATCCTTTGAAACTAGGAACCCTGCAAAGTATACAGCTTTC  
chimpanzee 1496 .....A.....  
gorilla 1497 .....T.....T  
orangutan 1500 .....C..T.....G.....T

human 1559 AAGGGAGAAAAATGTCCACAAGGAGTTGGAATATTTAAATCTTATGTTAGCCTTAGCAA  
chimpanzee 1556 .....C.....  
gorilla 1557 .....  
orangutan 1560 ....C.....G.....

**rs 594982**

human 1619 ACATGTTAACTTAAGCATTAA**C**ATTTAAAATTATATATTTTTGACCTTTTATAAATAC-T  
chimpanzee 1616 .....A.  
gorilla 1617 .....T.....A.  
orangutan 1620 .....G.....G.....A.

human 1678 CAGGGCAGTGTATTTTTAAATATTTTTCTGAGACATTGGATATCTTTGTTTATGGTTT-  
chimpanzee 1676 .....-  
gorilla 1677 .....G.....C.....-  
orangutan 1680 .....G.....T.....A.....A

human 1737 ----GTTATTAATACAGCTTTCAATTAATATGAAAAGTCAACTTAAAATCCTGTCATGT  
chimpanzee 1735 ----.C.....T.....  
gorilla 1736 ----.C.....T.....  
orangutan 1740 AGTT..C.....GT.....G.....T.....

human 1793 TTTTCATCATTTTTCTATGCTAAAATTCAAAGTTCCTTTATATTTTGAAAAATAGTTAAT  
chimpanzee 1791 .....C.....  
gorilla 1792 .....A....C  
orangutan 1800 .....A.....A.....

human 1853 ATTTTGATATAGCCATAGGAAGTAAGAAAAGAAATTACTTGTATTTTCTGGAAGATTTCA  
chimpanzee 1851 .....G.....  
gorilla 1852 .....T.....G.....G  
orangutan 1860 .....G.....T.....G

human 1913 AGAACAATTTAGAAATGTAAATAGCATATAGGTCATTTATGAGGTCATGTTTTAATGGGT  
chimpanzee 1911 .....  
gorilla 1912 .....C.....  
orangutan 1920 .....C.....

human	1973	AAATGTTAGAGCAAGCAGTATTCAATTTCTGTCTCATTTTACTAAGCTAAATAGGAACT
chimpanzee	1971	.....G.....
gorilla	1972	.....
orangutan	1980	.....
		<b>exon 3</b>
human	2033	TCCACAATACCATAACCTAACTCTCTTCTTAAACTCCTCAGGATCTGGTGTATAAGGACC
chimpanzee	2031	.....
gorilla	2032	.....C.....
orangutan	2040	.....G.....T.....
		<b>rs 6169</b>
human	2093	CAGCCAGGCCCAAATCCAGAAAACATGTACCTTCAAGGAACTGGTATACGAAACAGTGA
chimpanzee	2091	.....C..... <b>F</b> .....
gorilla	2092	.....C..... <b>F</b> .....
orangutan	2100	.....C..... <b>F</b> .....
human	2153	GAGTGCCCGGCTGTGCTCACCATGCAGATTCTTGTATAACATACCCAGTGGCCACCCAGT
chimpanzee	2151	.....T.....
gorilla	2152	.....
orangutan	2160	.....
human	2213	GTCACTGTGGCAAGTGTGACAGCGACAGCACTGATTGTACTGTGCGAGGCCTGGGGCCCA
chimpanzee	2211	.....C.....A.....
gorilla	2212	.....C.....C.....
orangutan	2220	.....C.....C.....
human	2273	GCTACTGCTCCTTTGGTGAAATGAAAGAATAAAGATCAGTGGACATTTAGGCCACATAC
chimpanzee	2271	.....
gorilla	2272	.....
orangutan	2280	.....C.....
human	2333	CCTTGTCTGAAGGACCAAGATATTCAAAAAGTCTGTGTGTGTGCAATGTGCCAGGGGA
chimpanzee	2331	.....
gorilla	2332	.....T..
orangutan	2340	.....G.....A.....T..
human	2393	CAAACCACTGGATCAGGGGATTCAGACTCTACTGATCCCTGGTCTACTGGCAGAGGGAAC
chimpanzee	2391	.....--.....
gorilla	2392	.....
orangutan	2400	.....T.....
human	2453	TCTGGAATTGAGAGTGTGGGGCCAGGACTCCATCATGATTGAGCTCTATATTCCTAG
chimpanzee	2449	.....A.....
gorilla	2452	.....
orangutan	2460	.....
human	2513	GTCTGATTTTCATAAGGTTTATTTCAGTCTTAACTCACAGACTTGTGCCTGGTTTCTTCTTT
chimpanzee	2509	.....A.....
gorilla	2512	.....C..
orangutan	2520	.....A.....
human	2573	AAAAATCTTAGAAATCTTCTCAGGCAATGCCTCTCTCTTAGGGGGAAACATAAGCCTAGA
chimpanzee	2569	.....
gorilla	2572	.....AA.....G.....
orangutan	2580	.....A.....T.....

human	2633	AGGAGGAAGCAGTAATGGGAGTGAGTGAAAGAATAACTGCAGCAGTCTTCTGGTAGACT
chimpanzee	2629	.....
gorilla	2632	.....C.....
orangutan	2640	.....G.....
human	2693	CTTGGGCCCTCTAGAGCAAGGTCAGCATCTTCAGCATTGTAGCGTCAATGCCTAGCACTC
chimpanzee	2689	.....
gorilla	2692	.....C.....
orangutan	2700	.....C.....
human	2753	TGCCTGGAACCTTAGAAACACAACAATGGCTTCTTTAGATCAGAA
chimpanzee	2749	.....
gorilla	2752	.....---
orangutan	2760	.....