

Supplemental Table 1:

Primer Sequences (Forward/ Reverse) used for RT-PCR of major mouse HS biosynthetic enzymes*.

HS Biosynthetic Enzyme:	Forward Primer	Reverse Primer
XylT1	AATTCCTTGTGCACCTTG	GACTGGGCAGGATTGATG
XylT2	ACGTTCAACCGCAAACCTACC	ATTGCTCAGTTCCCCATCTG
GalT1	CATTCTGCTGCTGTCCAAAC	ATCCACCCGGTACTTCACAG
GalT2	GCAAATCTCTGGGTTCAAGG	GTTGGCCACTTAGGCTGTTG
GlcAT1	TGTCATTACCCCCACCTACG	TGTGTAAAGAGGAGACCAGAGG
Ext1	TTCTGGTGTCTGCTGTGAC	CAAACCAGCTGGCAAATGTA
Ext2	ATTTTCTGGTGGCCAATGTC	TGTTGGGGAAGCTCTTCAGT
Ndst1	GGACATCTGGTCTAAG	GATGCCTTTGTGATAG
Ndst2	TGGTCCAAGGAGAAAACCTG	GGTACGACCTCCGAGTCAAA
Ndst3	CCACTGCCTTGTGTC	GGAGTACGCTCGGTC
Ndst4	CTAACTACTTCCACTC	ATGTGCACTGCATAACC
C5-Epi	AAACAGCAGAAGACAGGGACA	GCTGCAAAGACACACCTTCA
Hs2st	GGAGCTCGAGGACTTCATCA	GGAAGTCTCCAGAGCAAAC
Hs6st1	ACTGGACCGAACTCACCAAC	TCACACATGTGCAAGGAGGT
Hs6st2	GGCTCTTCTCCAGGTTCTCC	GGATGCTTTCCAAGTTGCTC
Hs6st3	GCCATCATGGAGAAGAAGGA	CATCCCCAGGATAGCAGGTA
Hs3st1	TGGAATAGACACCTCCCCTT	CGCCTGGATCATGAAGTAGC
Hs3st2	GGACGAGGACTGGACTGGTA	GCACCACCACTATCAGCTTG
Hs3st3a	CTGGCCTTACTTCTGGACGA	CAAAGTAGCTGGGCGTCTTC
Hs3st3b	TCATCATCGGGGTGAAGAAG	ACGATGAGCTTGGTGTCCCTT
Hs3st4	TCAAGAAAGGAGGGACACGC	TCTGGGTATAGTCAGAAATGGCCC
Hs3st5	TTCAAACAGCAGGTGTGGCT	TTCCGGAACCTCATGCAGCAA
Hs3st6	CTCTGAACCCCACTTCTTCG	AGGCGCTTAGCAACAGAACT
Sulf1	AAACAGTGCAACCCAAGACC	CTTGCACCGGATAACTCCTC
Sulf2	GACAGGGACGTCCTTAACCA	CCCATAGCTGTCCCAGTGAT

* Legend for enzymes: XylT1,2 (Xylosyltransferase-1, -2); GalT1,2 (Galactosyltransferase-1, -2); GlcAT1 (Glucuronosyltransferase-1); Ext1,2 (Exostosin-1); Ndst1-4 (N-deacetylase/ N-sulfotransferase 1-4); C5-Epi (C5-Epimerase); Hs2st (HS 2-O-sulfotransferase); Hs6st1-3 (HS 6-O-sulfotransferases 1-3); Hs3st1-6 (HS 3-O-sulfotransferases 1-6); Sulf1,2 (HS endosulfatase-1, -2).