Human Beta-1,4-galactosyltransferase 1(B4GALT1) ELISA kit

Product Code	CSB-EL002513HU
Abbreviation	B4GALT1
Target Name	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 1
Uniprot No.	P15291
Alias	B4GAL-T1, DKFZp686N19253, GGTB2, GT1, GTB, MGC50983, beta4Gal-T1, beta-1,4-galactosyltransferase 1|glycoprotein-4-beta-galactosyltransferase 2|lactose synthase
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Sample Types	serum, plasma, cell lysates, tissue homogenates
Detection Range	0.156 ng/mL-10 ng/mL
Sensitivity	0.039 ng/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Signal Transduction
Gene Names	B4GALT1
Tag Info	quantitative
Protein Description	Sandwich
Description	This Human B4GALT1 ELISA Kit was designed for the quantitative measurement of Human B4GALT1 protein in serum, plasma, cell lysates, tissue homogenates. It is a Sandwich ELISA kit, its detection range is 0.156 ng/mL-10 ng/mL and the sensitivity is 0.039 ng/mL.
Target Details	This gene is one of seven beta-1,4-galactosyltransferase (beta4GalT) genes. They encode type II membrane-bound glycoproteins that appear to have exclusive specificity for the donor substrate UDP-galactose; all transfer galactose in a beta1,4 linkage to similar acceptor sugars: GlcNAc, Glc, and Xyl. Each beta4GalT has a distinct function in the biosynthesis of different glycoconjugates and saccharide structures. As type II membrane proteins, they have an N-terminal hydrophobic signal sequence that directs the protein to the Golgi apparatus and which then remains uncleaved to function as a

transmembrane anchor. By sequence similarity, the beta4GalTs form four groups: beta4GalT1 and beta4GalT2, beta4GalT3 and beta4GalT4, beta4GalT5 and beta4GalT6, and beta4GalT7. This gene is unique among the beta4GalT genes because it encodes an enzyme that participates both in glycoconjugate and lactose biosynthesis. For the first activity, the enzyme adds galactose to N-acetylglucosamine residues that are either monosaccharides or the nonreducing ends of glycoprotein carbohydrate chains. The second activity is restricted to lactating mammary tissues where the enzyme forms a heterodimer with alpha-lactalbumin to catalyze UDP-galactose + D-glucose <=> UDP + lactose. The two enzymatic forms result from alternate transcription initiation sites and post-translational processing. Two transcripts, which differ only at the 5 end, with approximate lengths of 4.1 kb and 3.9 kb encode the same protein. The longer transcript encodes the type II membrane-bound, trans-Golgi resident protein involved in glycoconjugate biosynthesis. The shorter transcript encodes a protein which is cleaved to form the soluble lactose synthase.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of human B4GALT1 in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:1	Average %	96
	Range %	90-102
1:2	Average %	89
	Range %	84-95
1:4	Average %	91
	Range %	87-99
1:8	Average %	92
	Range %	88-96

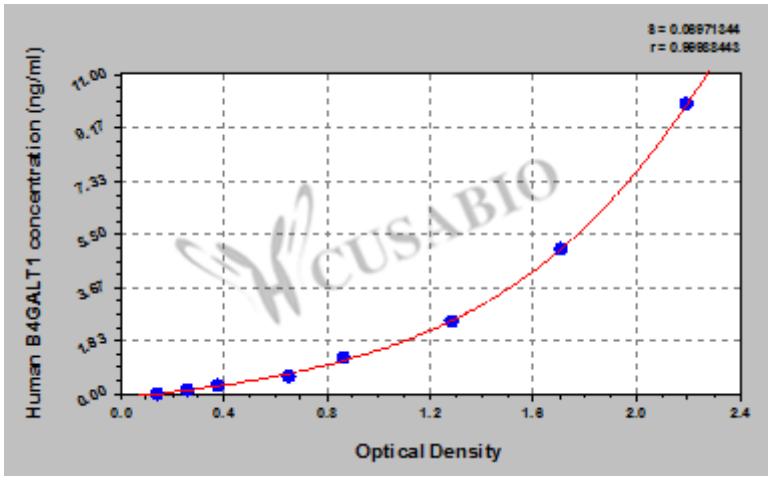
Recovery

The recovery of human B4GALT1 spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	86	80-90
EDTA plasma (n=4)	100	95-108

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



ng/ml	OD1	OD2	Average	Corrected
10	2.201	2.153	2.177	2.022
5	1.731	1.659	1.695	1.540
2.5	1.291	1.264	1.278	1.123
1.25	0.836	0.892	0.864	0.709
0.625	0.647	0.670	0.659	0.504
0.312	0.393	0.375	0.384	0.229
0.156	0.264	0.271	0.268	0.113
0	0.153	0.156	0.155	?

Msds

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