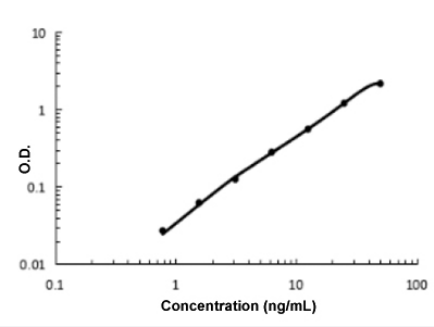
B4GALT1 (Human) ELISA Kit

Catalog # KA5762 Size 1 Kit

Applications



The standard curve is for the purpose of illustration only and should not be used to calculate unknowns. A standard curve should be generated each time the assay is performed.

Specification

Product Description	B4GALT1 (Human) ELISA Kit is a sandwich enzyme-linked immunosorbent assay for the quantitative measurement of human B4GALT1.
Suitable Sample	Cell Culture Supernates, Plasma (EDTA, Heparin), and Serum.
Sample Volume	100 uL
Label	HRP-conjugated
Detection Method	Colorimetric
Assay Type	Quantitative
Calibration Range	0.78 to 50 ng/mL
Reactivity	Human
Regulatory Status	For research use only (RUO)
Quality Control Testing	Standard curve The standard curve is for the purpose of illustration only and should not be used to calculate unknowns. A standard curve should be generated each time the assay is performed.
Storage Instruction	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles.

Applications

- Quantification

Gene Info — B4GALT1

Entrez GeneID	2683
Protein Accession#	P15291
Gene Name	B4GALT1
Gene Alias	B4GAL-T1, DKFZp686N19253, GGTB2, GT1, GTB, MGC50983, beta4Gal-T1
Gene Description	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 1
Omim ID	137060 607091
Gene Ontology	Hyperlink
Gene Summary	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. [provided by RefSeq
Other Designations	OTTHUMP00000021196|UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase 1, membrane-bound form|glycoprotein-4-beta-galactosyltransferase 2|lactose synthase A protein

Pathway

- Galactose metabolism
- Glycosphingolipid biosynthesis - lacto and neolacto series
- Keratan sulfate biosynthesis
- Metabolic pathways
- N-Glycan biosynthesis

Disease

- Alzheimer disease
- Cerebral Amyloid Angiopathy
- Genetic Predisposition to Disease
- Neuroblastoma
- Tobacco Use Disorder