

Klotho beta Active Protein | KLB active protein

Klotho beta, Recombinant, Human (Beta-klotho, BKL, BetaKlotho, Klotho beta-like Protein)

CATALOG #
AAA14751

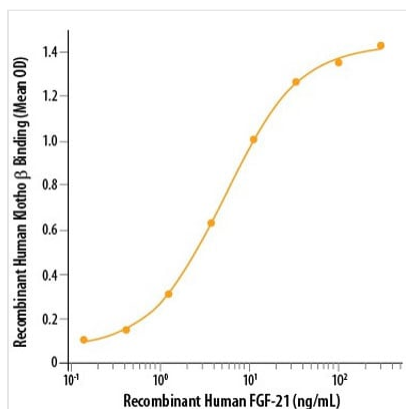
PRODUCT SYNONYMS

Klotho beta; Recombinant; Human (Beta-klotho; BKL; BetaKlotho; Klotho beta-like Protein); KLB active protein

PRODUCT SPECIFICATIONS

Purity/Purification	Highly Purified >95% by SDS-PAGE, reducing conditions and visualized with silver stain.
Form/Format	Supplied as a liquid in PBS, pH 6.8, 0.1mM EDTA, 50% glycerol.
Concentration	0.27mg/ml (varies by lot)
Application Notes	SDS-PAGE: 113-125kD, reducing conditions
Activity	Measured by its binding ability in a functional ELISA.
Endotoxin Level	<1EU/ug (LAL)
N-terminal Sequence Analysis	Phe53
Specific Activity	When Recombinant human FGF-21 is immobilized at 1ug/ml (100ul/well) Recombinant human Klotho B His-tag binds with an ED50 of 2.5-20ng/ml
Preparation and Storage	Aliquot to avoid repeated freezing and thawing and store at -70 degree C. Aliquots are stable for 6 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.

IMAGES



ELISA

Western Blot (reducing (R) conditions) analysis using AAA14751 (1ug/lane) and visualized by silver staining, showing a single band at 126kD.

ADDITIONAL INFORMATION

Related Product Information for KLB active protein	Klotho beta, a divergent structural member of the glycosidase I superfamily, is expressed primarily in the liver and pancreas, with lower expression in adipose tissue. Like Klotho, Klotho beta facilitates binding between FGF19 subfamily members and their receptors via formation of a ternary complex. The Klotho beta mediated interaction of human FGF19 (mouse FGF15) with FGF Receptor 4 in the liver negatively regulates bile acid synthesis by controlling the secretion of two key bile acid synthase genes, cholesterol 7-alpha hydroxylase (Cyp7a1) and sterol 12-alpha hydroxylase (Cyp8b1). Klotho beta is also a cofactor for the interaction of FGF21 with FGF Receptor 1c in adipocytes, which allows FGF21 to stimulate GLUT1 expression, upregulating adipocyte insulin-independent glucose uptake. The 1043aa type I transmembrane protein is composed of a 51aa signal sequence, a 943aa extracellular domain (ECD) containing two glycosidase-like regions, a 21aa transmembrane domain, and 28aa intracellular tail. Since Klotho-related proteins lack critical active site Glu residues present in beta-glycosidases, it was initially unclear whether they were functional enzymes. However, glucuronidase activity has since been demonstrated for Klotho, indicating that physiologically relevant enzymatic activity for Klotho beta is also possible. The extracellular domain shares 79%, 87%, 87% and 67% identity with mouse, equine, canine and rat Klotho beta, respectively. The low identity with rat reflects aa discordance within rodent ECD. Recombinant protein corresponding to Phe53-Leu997 from human Klotho beta, with a C-terminal 10-His tag expressed in NSO cells. Swiss/UniProt Accession: Q86Z14.
Product Categories/Family for KLB active protein	Molecular Biology; MB-Enzymes; Glycosidase

NCBI AND UNIPROT INFORMATION

NCBI GI #	119613331
NCBI GeneID	152831
UniProt Accession #	Q86Z14; Q2M3K8
Molecular Weight	110kD
NCBI Official Full Name	klotho beta
NCBI Official Synonym Full Names	klotho beta
NCBI Official Symbol	KLB
NCBI Official Synonym Symbols	BKL
NCBI Protein Information	beta-klotho; betaKlotho; klotho beta like; klotho beta-like protein
UniProt Protein Name	Beta-klotho
UniProt Gene Name	KLB
UniProt Synonym Gene Names	BKL; BetaKlotho
UniProt Entry Name	KLOTB_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.