

Klotho beta Protein, Human (HEK293, His)

Cat. No.:	HY-P77972
Synonyms:	betaKlotho; beta-klotho; BKL; KLB; klotho beta like; Klotho beta; MGC142213
Species:	Human
Source:	HEK293
Accession:	Q86Z14 (M30-T983)
Gene ID:	152831
Molecular Weight:	Approximately 112-140 kDa due to the glycosylation.

PROPERTIES

Biological Activity	<p>1. Immobilized Human Beta Klotho at 2 µg/mL (100 µL/Well). Dose response curve for Anti-Beta Klotho Antibody1 with the EC₅₀ is < 80.2 ng/mL determined by ELISA.</p> <p>2. Immobilized Human Beta Klotho at 2 µg/mL (100µl/Well). Dose response curve for Anti-Beta Klotho Antibody2, hFc Tag with the EC₅₀ of < 89.8 ng/ml determined by ELISA.</p> <p>3. Measured in a cell proliferation assay using NIH-3T3 mouse embryonic fibroblast cells. The ED₅₀ for this effect is 0.2198 ng/mL in the presence of 1µg/mL Human FGF-21, corresponding to a specific activity is 4.549×10³ units/mg.</p>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>The Klotho beta protein plays a significant role in transcriptional regulation by contributing to the repression of cholesterol 7-alpha-hydroxylase (CYP7A1), a key enzyme in bile acid synthesis. While likely inactive as a glycosidase, Klotho beta enhances the binding ability of FGFR1 and FGFR4 to FGF21, indicating its involvement in fibroblast growth factor (FGF) signaling. The protein directly interacts with both FGF19 and FGF21, underscoring its association with crucial components of the FGF pathway. These interactions, particularly with FGF21, suggest a potential role in metabolic regulation and highlight Klotho beta's involvement in modulating cellular responses and metabolic pathways (</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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