

Beta Klotho Protein, Human, Recombinant (His)

General Information

Synonyms:	beta-klotho;MGC142213;betaKlotho;BKL; β -klotho;KLB;klotho beta like;Klotho β ; β Klotho; β Klotho;klotho β like;Klotho beta
Protein Construction:	Met30-Thr983
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q86Z14
Molecular Weight:	111.6 kDa (predicted). Due to glycosylation, the protein migrates to 115-130 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	1. Immobilized Human FGF21, mFc Tag at 2 μ g/ml (100 μ l/Well) on the plate. Dose response curve for Human Beta Klotho, His Tag with the EC50 of 1.48 μ g/ml determined by ELISA. 2. Human Beta Klotho, His Tag captured on CM5 Chip via anti-His antibody can bind Human FGF21, mFc Tag with an affinity constant of 0.54nM as determined in SPR assay.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Beta-klotho (KLB) is a coreceptor required for endocrine fibroblast growth factor (FGF) 15/19 and FGF21 signaling in the brain. Klb is prominent within the hypothalamus, which is consistent with its metabolic functions, but diverse

roles for Klb are now emerging. Central Klb expression is low but discrete and may govern FGF-targeted sites.

Reference

Bono BS, et al. Spatial distribution of beta-klotho mRNA in the mouse hypothalamus, hippocampal region, subiculum, and amygdala. J Comp Neurol. 2022 Feb 10. doi: 10.1002/cne.25306. Epub ahead of print. PMID: 35143049.

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