Data Sheet (Cat.No.TMPY-02191)

TargetMol

BLNK Protein, Human, Recombinant (His)

General Information

Synonyms:	BLNK-S;bca;SLP-65;B-cell linker;LY57;SLP65;AGM4;BASH
Protein Construction:	A DNA sequence encoding the human BLNK isoform 1 (AAH18906.1) (Met 1-Ser 456) was fused with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAH18906.1
Molecular Weight:	53 kDa (predicted); 95-100 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

B-cell linker protein, also known as B-cell adapter containing a SH2 domain protein, B-cell adapter containing a Src homology 2 domain protein, Cytoplasmic adapter protein, Src homology 2 domain-containing leukocyte protein of 65 kDa, SLP-65 and BLNK, is a cytoplasm and cell membrane protein which contains oneSH2 domain. BLNK is expressed in B-cell lineage and fibroblast cell lines. Highest levels of expression is in the spleen, with lower levels in the liver, kidney, pancreas, small intestines and colon. BLNK functions as a central linker protein

that bridges kinases associated with the B-cell receptor (BCR) with a multitude of signaling pathways, regulating biological outcomes of B-cell function and development. BLNK plays a role in the activation of ERK / EPHB2, MAP kinase p38 and JNK. BLNK modulates AP1 activation. It is important for the activation of NF-kappa-B and NFAT. BLNK plays an important role in BCR-mediated PLCG1 and PLCG2 activation and Ca2+mobilization and is required for trafficking of the BCR to late endosomes. BLNK may be required for the RAC1-JNK pathway. It plays a critical role in orchestrating the pro-B cell to pre-B cell transition. BLNK also plays an important role in BCR-induced B-cell apoptosis.Defects in BLNK are the cause of agammaglobulinemia type 4 (AGM4) which is a primary immunodeficiency characterized by profoundly low or absent serum antibodies and low or absent circulating B cells due to an early block of B-cell development.

Reference

Fu C., et al., 1998, Immunity 9:93-103.
Minegishi Y., et al., 1999, Science 286:1954-1957.
Chiu C.W., et al., 2002, EMBO J. 21:6461-6472.
Taguchi T., et al., 2004, Immunology 112:575-582.

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