Recombinant BLK protein (His tag)

Catalog Number	547043
Synonyms	B lymphocyte kinase; p55-Blk
Species	Human
Expression System	E. coli
Accession	P51451
Molecular Weight	Predictes a molecular mass of 52.69 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 53 kDa band.

Product Information

Sequence Region	61-505
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 61-505 aa (P51451) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Tyrosine-protein kinase Blk (BLK) fragment (amino acids 61-505) is a high-purity protein designed for studying B-lymphocyte signaling and kinase activity. This fragment fully encompasses the SH2 and Protein kinase domains, making it an ideal tool for investigating domain-specific functions in B-cell development, immune response, and insulin secretion regulation. Tyrosine-protein kinase Blk (BLK) is a non-receptor tyrosine kinase crucial for B-lymphocyte development, differentiation, and signaling. It plays a key role in B-cell receptor (BCR) signaling by phosphorylating CD79A, CD79B, and immunoglobulin G receptors (FCGR2A/B/C). BLK supports the pro-B to pre-B cell transition and contributes to NF-kappa-B activation via the pre-BCR complex. Additionally, it modulates pancreatic beta-cell function by upregulating PDX1 and NKX6-1 to stimulate glucose-responsive insulin secretion and phosphorylates CGAS to regulate its cytosolic retention. BLK is localized to the cell membrane via lipid anchoring, particularly in lipid rafts, which is essential for its phosphorylation activity on CD79A and CD79B.