Recombinant Human BTK Protein (M1-S659), Tag Free

Cat. No. BTK-0743H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human BTK(M1-S659 end) Protein was expressed in Insect cell.
Species	Human
Source	Insect Cells
ProteinLength	M1-S659
Description	Non-receptor tyrosine kinase indispensable for B lymphocyte development, differentiation and signaling. Binding of antigen to the B-cell antigen receptor (BCR) triggers signaling that ultimately leads to B-cell activation. After BCR engagement and activation at the plasma membrane, phosphorylates PLCG2 at several sites, igniting the downstream signaling pathway through calcium mobilization, followed by activation of the protein kinase C (PKC) family members. PLCG2 phosphorylation is performed in close cooperation with the adapter protein B-cell linker protein BLNK. BTK acts as a platform to bring together a diverse array of signaling proteins and is implicated in cytokine receptor signaling pathways. Plays an important role in the function of immune cells of innate as well as adaptive immunity, as a component of the Toll-like receptors (TLR) pathway. The TLR pathway acts as a primary surveillance system for the detection of pathogens and are crucial to the activation of host defense. Especially, is a critical molecule in regulating TLR9 activation in splenic B-cells. Within the TLR pathway, induces tyrosine phosphorylation of TIRAP which leads to TIRAP degradation. BTK plays also a critical role in transcription regulation. Induces the activity of NF-kappa-B, which is involved in regulating the expression of

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	hundreds of genes. BTK is involved on the signaling pathway linking TLR8 and TLR9 to NF-kappa-B. Transiently phosphorylates transcription factor GTF2I on tyrosine residues in response to BCR. GTF2I then translocates to the nucleus to bind regulatory enhancer elements to modulate gene expression. ARID3A and NFAT are other transcriptional target of BTK. BTK is required for the formation of functional ARID3A DNA-binding complexes. There is however no evidence that BTK itself binds directly to DNA. BTK has a dual role in the regulation of apoptosis.
Form	Liquid
Endotoxin	< 0.01 EU per μg of the protein
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile
Shipping	It is shipped out with blue ice.

GENE INFORMATION

Gene Name	BTK Bruton agammaglobulinemia tyrosine kinase [Homo sapiens (human)]
Official Symbol	BTK
Synonyms	BTK; Bruton agammaglobulinemia tyrosine kinase; AGMX1, IMD1; tyrosine-protein kinase BTK; ATK; PSCTK1; XLA; B-cell progenitor kinase; agammaglobulinaemia tyrosine kinase; tyrosine-protein kinase BTK isoform (lacking exon 14); dominant-

	negative kinase-deficient Brutons tyrosine kinase; AT; BPK; IMD1; AGMX1; MGC126261; MGC126262;
Gene ID	695
mRNA Refseq	NM_000061
Protein Refseq	NP_000052
MIM	300300
UniProt ID	Q06187

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