

## BTK Protein, Human (P. pastoris, His)

Cat. No.:	HY-P700598
Synonyms:	Agammaglobulinemia tyrosine kinase ; ATKB-cell progenitor kinase ; BPKBruton tyrosine kinase
Species:	Human
Source:	P. pastoris
Accession:	Q06187 (M1-S659)
Gene ID:	695
Molecular Weight:	78.2 kDa

### PROPERTIES

#### AA Sequence

AAVILESI FL	KRSQQKKKTS	PLNFKKRL FL	LTVHKLSYYE
YDFERGRRS	KKGSIDVEKI	TCVETVVPEK	NPPPERQIPR
RGEESSEMEQ	ISIIERFPYP	FQVVYDEGPL	YVFSPTTEELR
KRWIHQLKNV	IRYNSDLVQK	YHPCFWIDGQ	YLCCSQ TAKN
AMGCQILENR	NGSLKPGSSH	RKTKKPLPPT	PEEDQILKKP
LPPEPAAAPV	STSELKKVVA	LYDYMPMNAN	DLQLRKGDEY
FILLEESNLPW	WRARDKNGQE	GYIPSNYVTE	AEDSIEMYEW
YSKHMTRSQA	EQLLKQEGKE	GGFIVRDS SK	AGKYTVSVFA
KSTGDPQGVI	RHYVVCSTPQ	SQYYLAEKHL	FSTIPELINY
HQHNSAGLIS	RLKYPVVSQQN	KNAPSTAGLG	YGSWEIDPKD
LTFLKELGTG	QFGVVKYGKW	RGQYDVAIKM	IKEGSMSEDE
FIEEAKVMMN	LSHEKLVQLY	GVCTKQRPIF	IITEYMANGC
LLNYLREMRH	RFQTQQLLEM	CKDVCEAMEY	LESKQFLHRD
LAARNCLVND	QGVVKVSDFG	LSRYVLDD EY	TSSVGSKFPV
RWSPPEVLMY	SKFSSKSDIW	AFGVLMWEIY	SLGKMPYERF
TNSE TAEHIA	QGLRLYRPHL	ASEKVYTIMY	SCWHEKADER
PTFKILL SNI	LDVMDEES		

**Biological Activity** The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

**Appearance** Lyophilized powder.

**Formulation** Lyophilized from a 0.2 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

**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<sub>2</sub>O.

**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**

BTK Protein, a non-receptor tyrosine kinase, is indispensable for B lymphocyte development, differentiation, and signaling. Upon antigen binding to the B-cell antigen receptor (BCR), BTK triggers a signaling cascade leading to B-cell activation, phosphorylating PLCG2 and initiating downstream pathways involving calcium mobilization and protein kinase C (PKC) activation. Serving as a platform for diverse signaling proteins, BTK is implicated in cytokine receptor signaling pathways and is crucial in innate and adaptive immunity, particularly within the Toll-like receptors (TLR) pathway. It plays a critical role in regulating TLR9 activation in splenic B-cells and induces the activity of NF-kappa-B, contributing to the transcriptional regulation of numerous genes. Additionally, BTK activates NLRP3 inflammasome assembly, phosphorylates transcription factor GTF2I, and is involved in apoptosis regulation, highlighting its multifaceted functions in immune response and cellular processes.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA