

## Recombinant Human Bruton Tyrosine Kinase/BTK Kinase Protein (His Tag)

Catalog No. PKSH030407

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

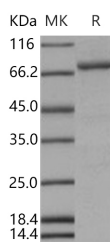
### Description

<b>Synonyms</b>	AGMX1;AT;ATK;BPK;IMD1;PSCTK1;XLA
<b>Species</b>	Human
<b>Expression Host</b>	Baculovirus-Insect Cells
<b>Sequence</b>	Met 1-Ser 659
<b>Accession</b>	NP_000052.1
<b>Calculated Molecular Weight</b>	77.8 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	The specific activity was determined to be 115 nmol/min/mg using Poly(Glu, Tyr)4:1 peptide as substrate.

### Properties

<b>Purity</b>	> 85 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
<b>Shipping</b>	This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < - 20°C.
<b>Formulation</b>	Supplied as sterile solution of 20mM Tris, 500mM NaCl, 10% glycerol, pH 7.0
<b>Reconstitution</b>	Not Applicable

### Data



> 85 % as determined by reducing SDS-PAGE.

### Background

Bruton's tyrosine kinase (or BTK) is a type of kinase protein expressed in B lymphocytes and T cells. BTK contains a PH domain which binds phosphatidylinositol(3,4,5)-trisphosphate (PIP3). After binding to PIP3, BTK is induced to phosphorylate phospholipase C, which in turn hydrolyzes PIP2 into two second messengers, IP3 and DAG, which then modulate the activity of downstream proteins during B-cell signaling. Btk is also found implicated in the primary immunodeficiency disease X-linked agammaglobulinemia(Bruton's agammaglobulinemia). BTK played a key role in B-cell maturation as well as mast cell activation through the high-affinity IgE receptor. Patients with X-linked

### For Research Use Only

agammaglobulinemia have normal pre-B cell populations in their bone marrow but these B-cells can not mature and enter the circulation.