abcam

Product datasheet

Recombinant human BTK protein ab205800

1 References 5 Images

Description

Product name	Recombinant human BTK protein
Biological activity	The specific activity of ab205800 was determined to be 43 nmol/min/mg.
Purity	> 75 % Densitometry. Purity is lot specific. Please contact our technical Support team for details. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	Q06187
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MAAVILESIFLKRSQQKKKTSPLNFKKRLFLLTVHKLSYYEY DFERGRRG SKKGSIDVEKITCVETVVPEKNPPPERQIPRRGEESSEME QISIIERFPY PFQVVYDEGPLYVFSPTEELRKRWIHQLKNVIRYNSDLVQ KYHPCFWIDG QYLCCSQTAKNAMGCQILENRNGSLKPGSSHRKTKKPLP PTPEEDQILKK PLPPEPAAAPVSTSELKKVVALYDYMPMNANDLQLRKGD EYFILEESNLP WWRARDKNGQEGYIPSNYVTEAEDSIEMYEWYSKHMTRS QAEQLLKQEGK EGGFIVRDSSKAGKYTVSVFAKSTGDPQGVIRHYVVCSTP QSQYYLAEKH LFSTIPELINYHQHNSAGLISRLKYPVSQQNKNAPSTAGLGY GSWEIDPK DLTFLKELGTGQFGVVKYGKWRGQYDVAIKMIKEGSMSE DEFIEEAKVMM NLSHEKLVQLYGVCTKQRPIFIITEYMANGCLLNYLREMRHR FQTQQLLE MCKDVCEAMEYLESKQFLHRDLAARNCLVNDQGVVKVS DFGLSRYVLDDE YTSSVGSKFPVRWSPPEVLMYSKFSSKSDIWAFGVLMW EIYSLGKMPYER

FTNSETAEHIAQGLRLYRPHLASEKVYTIMYSCWHEKADE
RPTFKILLSN ILDVMDEES

Predicted molecular weight	78 kDa including tags
Amino acids	1 to 659
Tags	His tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab205800** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE
Form	Liquid

Preparation and Storage

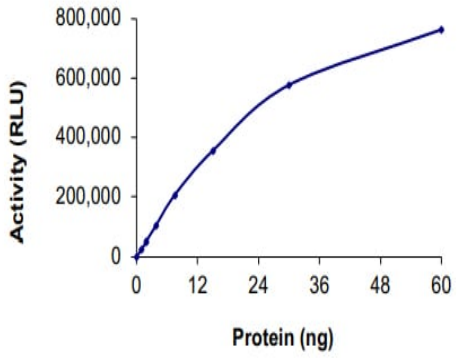
Stability and Storage	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. pH: 7.00 Preservative: 1.02% Imidazole Constituents: 0.82% Sodium phosphate, 1.74% Sodium chloride, 25% Glycerol (glycerin, glycerine), 0.002% PMSF, 0.004% DTT This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function	Plays a crucial role in B-cell ontogeny. Transiently phosphorylates GTF2I on tyrosine residues in response to B-cell receptor cross-linking. Required for the formation of functional ARID3A DNA-binding complexes.
Involvement in disease	Defects in BTK are the cause of X-linked agammaglobulinemia (XLA) [MIM:300755]; also known as X-linked agammaglobulinemia type 1 (AGMX1) or immunodeficiency type 1 (IMD1). XLA is a humoral immunodeficiency disease which results in developmental defects in the maturation pathway of B-cells. Affected boys have normal levels of pre-B-cells in their bone marrow but virtually no circulating mature B-lymphocytes. This results in a lack of immunoglobulins of all classes and leads to recurrent bacterial infections like otitis, conjunctivitis, dermatitis, sinusitis in the first few years of life, or even some patients present overwhelming sepsis or meningitis, resulting in death in a few hours. Treatment in most cases is by infusion of intravenous immunoglobulin. Defects in BTK may be the cause of X-linked hypogammaglobulinemia and isolated growth hormone deficiency (XLA-IGHD) [MIM:307200]; also known as agammaglobulinemia and isolated growth hormone deficiency or Fleisher syndrome or isolated growth hormone deficiency type 3 (IGHD3). In rare cases XLA is inherited together with isolated growth hormone deficiency (IGHD).
Sequence similarities	Belongs to the protein kinase superfamily. Tyr protein kinase family. TEC subfamily. Contains 1 Btk-type zinc finger. Contains 1 PH domain. Contains 1 protein kinase domain. Contains 1 SH2 domain.

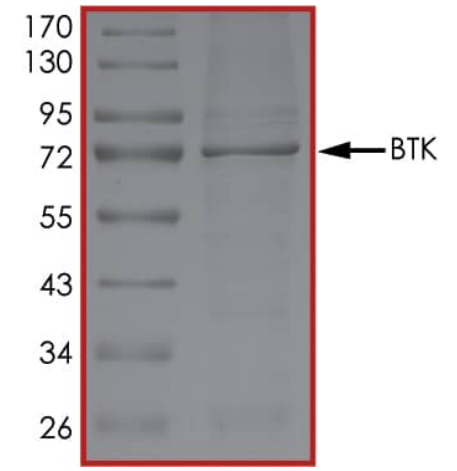
	Contains 1 SH3 domain.
Post-translational modifications	Autophosphorylated on Tyr-223 and Tyr-551. Phosphorylation of Tyr-223 may create a docking site for a SH2 containing protein.
Cellular localization	Cytoplasm. Membrane. Nucleus.

Images



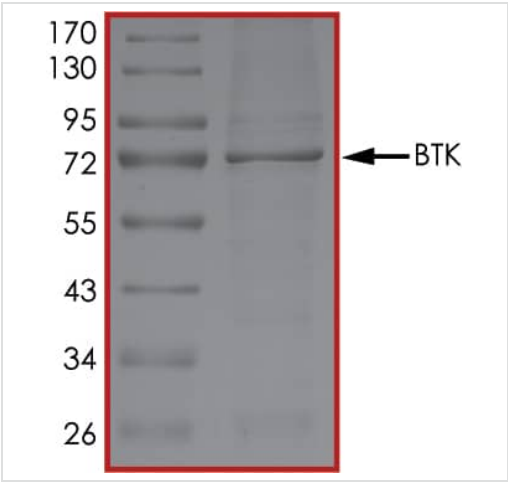
Functional Studies - Recombinant human BTK protein (ab205800)

The specific activity of BTK (ab205800) was determined to be 35 nmol/min/mg as per activity assay protocol and was equivalent to 49 nmol/min/mg as per radiometric assay



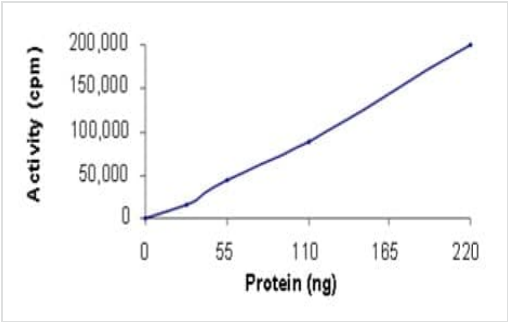
SDS-PAGE - Recombinant human BTK protein (ab205800)

SDS PAGE analysis of ab205800



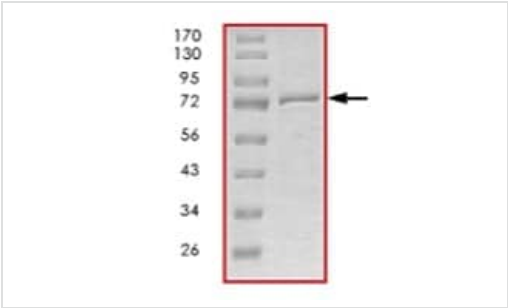
SDS-PAGE - Recombinant human BTK protein (ab205800)

SDS PAGE analysis of ab205800



Functional Studies - Recombinant human BTK protein (ab205800)

Kinase Assay demonstrating specific activity of ab205800



SDS-PAGE - Recombinant human BTK protein (ab205800)

SDS-PAGE analysis of ab205800.

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