重组人BTK蛋白

Recombinant BTK protein (His tag)

目录号 Catalog Number	540190
同用名 Synonyms	Agammaglobulinemia tyrosine kinase; ATK; B-cell progenitor kinase; BPK; Bruton tyrosine kinase
种属 Species	Human
表达系统 Expression System	E. coli
蛋白编号 Accession	Q06187
分子量 Molecular Weight	Predictes a molecular mass of 53.08 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 55 kDa band.

产品信息

氨基酸序列 Amino Acid Sequence	MNHKVHHHHH HGGSLKKVVA LYDYMPMNAN DLQLRKGDEY FILEESNLPW WRARDKNGQE GYIPSNYVTE AEDSIEMYEW YSKHMTRSQA EQLLKQEGKE GGFIVRDSSK AGKYTVSVFA KSTGDPQGVI RHYVVCSTPQ SQYYLAEKHL FSTIPELINY HQHNSAGLIS RLKYPVSQQN KNAPSTAGLG YGSWEIDPKD LTFLKELGTG QFGVVKYGKW RGQYDVAIKM IKEGSMSEDE FIEEAKVMMN LSHEKLVQLY GVCTKQRPIF IITEYMANGC LLNYLREMRH RFQTQQLLEM CKDVCEAMEY LESKQFLHRD LAARNCLVND QGVVKVSDFG LSRYVLDDEY TSSVGSKFPV RWSPPEVLMY SKFSSKSDIW AFGVLMWEIY SLGKMPYERF TNSETAEHIA QGLRLYRPHL ASEKVYTIMY SCWHEKADER PTFKILLSNI LDVMDEES
性状 Form	冻干粉末 Lyophilized powder
组分 Formulation	Lyophilized from sterile 25 mM HEPES, 50 mM NaCl, pH 7.4
纯度 Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
内毒素 Endotoxin	Not tested.
活性 Activity	Not tested.
稳定性 Stability	Samples are stable for up to twelve months from date of receipt at -70℃
蛋白构建 Protein Construction	DNA encoding 216-659 aa (Q06187) were fused with N-terminal 6His tag.

保存与运输

复溶 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.
储存 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.
运输 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.

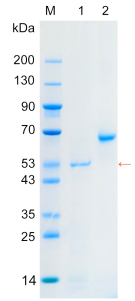
功能描述

研究背景 Background

Recombinant Human BTK Kinase Domain (aa 216-659) is a high-purity protein fragment encompassing the SH2 and Protein Kinase functional domains of Bruton's Tyrosine Kinase. This product serves as an essential tool for investigating B-cell receptor signaling, kinase activity, and immune pathway regulation in life science research.
Tyrosine-protein kinase BTK is a non-receptor tyrosine kinase crucial for B lymphocyte development, differentiation, and signaling. Following B-cell antigen receptor engagement, BTK phosphorylates PLCG2 in cooperation with BLNK adapter protein, initiating downstream signaling through calcium mobilization and PKC activation. BTK functions as a signaling platform in cytokine receptor pathways and Toll-like receptor pathways, particularly regulating TLR9 activation in splenic B-cells. It induces NF-kappa-B activity and is involved in TLR8/TLR9 to NF-kappa-B signaling pathways. BTK also activates NLRP3 inflammasome assembly through NLRP3 phosphorylation and plays a role in STING1-mediated type I interferon response by phosphorylating DDX41. The protein exhibits dual roles in apoptosis regulation and transiently phosphorylates transcription factors including GTF2I, ARID3A, and NFAT. BTK localizes predominantly in the cytoplasm under steady-state conditions, translocates to the plasma membrane following BCR engagement via its PH domain, and shuttles between the nucleus and cytoplasm with nuclear export mediated by CRM1.

验证数据

SDS-PAGE



Recombinant BTK protein (His tag) SDS-PAGE
M: Marker; Lane 1: BTK; Lane 2: BSA