abcam

Product datasheet

Recombinant human BTK protein ab42616

Overview

Product name	Recombinant human BTK protein
Protein length	Full length protein

Description

Nature	Recombinant
Source	Baculovirus infected Sf9 cells

Amino Acid Sequence

Species	Human
Molecular weight	106 kDa
Tags	GST tag N-Terminus

Specifications

Our Abpromise guarantee covers the use of **ab42616** in the following tested applications.

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

Biological activity	Specific Activity : >450 U/mg. One unit defined as the amount of enzyme that will transfer 1nmol phosphate to Tyr substrate per minute at pH 7.4 and 30deg.C. Assay buffer : 50mM HEPES pH 7.4, 3mM MgCl2, 3mM MnCl2, 1mM DTT, 3um Na-orthovanadate, 0.1M ATP, 30ug/ml Poly (Glu:Tyr) 4:1 substrate and 0.75ug/ml recombinant BTK.
Applications	Inhibition Assay
Form	Liquid
Additional notes	This protein was expressed in Baculovirus infected Sf9 cells.

Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. Preservative: None Constituents: 30% Glycerol, 0.05% Tween 20, 3mM DTT, 25mM Tris HCl, 100mM Sodium chloride, 10mM reduced Glutathione, pH 8.0 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.

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit http://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors