

Product datasheet

Anti-BTK antibody ab137503

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Overview

Product name	Anti-BTK antibody
Description	Rabbit polyclonal to BTK
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, WB
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Cow, Pig 
Immunogen	Recombinant fragment, corresponding to a region within amino acids 91-417 of Human BTK (UniProt ID: Q06187).
Positive control	Raji whole cell lysate; A431 cells. This antibody gave a positive result when used in the following formaldehyde fixed cell lines: DU145
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 1.21% Tris, 0.75% Glycine, 10% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab137503 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use at an assay dependent concentration.
WB		1/1000 - 1/10000. Predicted molecular weight: 76 kDa.

Target

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	<p>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.</p> <p>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).</p>
Sequence similarities	<p>Belongs to the protein kinase superfamily. Tyr protein kinase family. TEC subfamily.</p> <p>Contains 1 Btk-type zinc finger.</p> <p>Contains 1 PH domain.</p> <p>Contains 1 protein kinase domain.</p> <p>Contains 1 SH2 domain.</p> <p>Contains 1 SH3 domain.</p>
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.

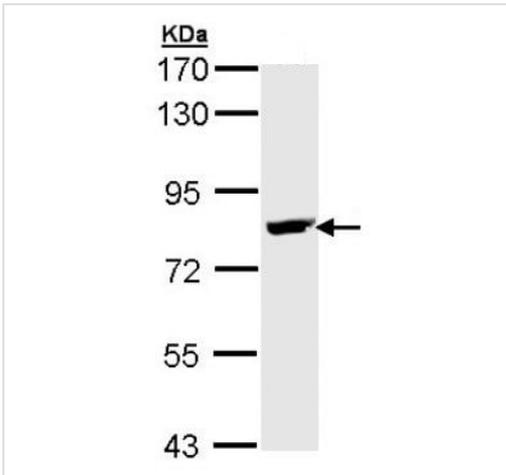
Images



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Immunocytochemistry/ Immunofluorescence - Anti-BTK antibody (ab137503)

ICC/IF image of ab137503 stained DU145 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab137503 at 1µg/ml overnight at +4°C. The secondary antibody (pseudo-colored green) was Alexa Fluor® 488 goat anti- rabbit (ab150081) IgG (H+L) preadsorbed, used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1h at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43µM for 1hour at room temperature.

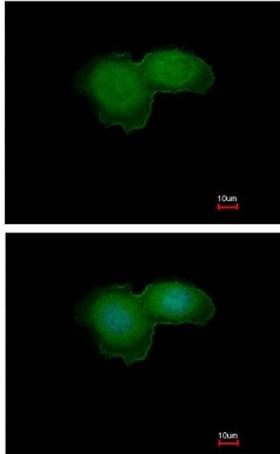


Western blot - Anti-BTK antibody (ab137503)

Anti-BTK antibody (ab137503) at 1/5000 dilution + Raji whole cell lysate at 30 µg

Predicted band size: 76 kDa

7.5% SDS PAGE



Immunofluorescence analysis of paraformaldehyde fixed A431 cells, labelling BTK with ab137503 at 1/500 dilution. The lower image is costained with Hoechst 33342.

Immunocytochemistry/ Immunofluorescence - Anti-BTK antibody (ab137503)

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