

Anti-Thymidine Kinase 2/TK2 Antibody Picoband®

Catalog Number: A03321-1

About TK2

Thymidine kinase 2, mitochondrial is a protein that in humans is encoded by the TK2 gene. This gene encodes a deoxyribonucleoside kinase that specifically phosphorylates thymidine, deoxycytidine, and deoxyuridine. The encoded enzyme localizes to the mitochondria and is required for mitochondrial DNA synthesis. Mutations in this gene are associated with a myopathic form of mitochondrial DNA depletion syndrome. Alternate splicing results in multiple transcript variants encoding distinct isoforms, some of which lack transit peptide, so are not localized to mitochondria.

Overview

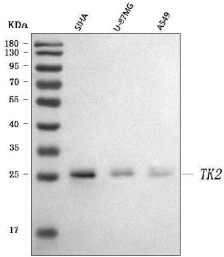
Product Name	Anti-Thymidine Kinase 2/TK2 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-Thymidine Kinase 2/TK2 Antibody Picoband® catalog # A03321-1. Tested in ELISA, Flow Cytometry, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	O00142

Technical Details

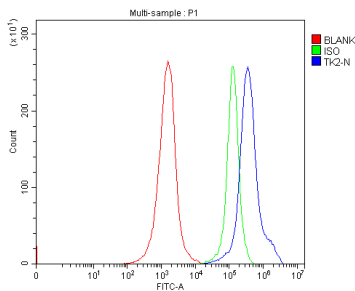
Immunogen	E.coli-derived human Thymidine Kinase 2/TK2 recombinant protein (Position: V34-P265).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5 ug/ml, -

Anti-Thymidine Kinase 2/TK2 Antibody Picoband® (A03321-1) Images



Western blot analysis of Thymidine Kinase 2/TK2 using anti-Thymidine Kinase 2/TK2 antibody (A03321-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human SiHa whole cell lysates, Lane 2: human U-87 MG whole cell lysates, Lane 3: human A549 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Thymidine Kinase 2/TK2 antigen affinity purified polyclonal antibody (Catalog # A03321-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Thymidine Kinase 2/TK2 at approximately 25 kDa. The expected band size for Thymidine Kinase 2/TK2 is at 31 kDa.



Flow Cytometry analysis of Jurkat cells using anti-Thymidine Kinase 2/TK2 antibody (A03321-1). Overlay histogram showing Jurkat cells stained with A03321-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Thymidine Kinase 2/TK2 Antibody (A03321-1, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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Anti-Thymidine Kinase 2/TK2 Antibody

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