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antibody and ELISA experts

BOSTER BIOLOGICAL TECHNOLOGY
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Anti-KIF3A Antibody Picoband™

Catalog Number: PB9654

About KIF3A

Kinesin-like protein KIF3A is a protein that in humans is encoded by the KIF3A gene. KIF3A is one subunit of the heterotrimeric motor protein, kinesin-2, that was initially isolated from sea urchin egg/embryo cytosol using microtubule affinity purification. This motor consists of two kinesin-related subunits (called KIF3A and KIF3B or 3C in vertebrates) and an associated protein (KAP3), and it transports protein complexes, nucleic acids and organelles towards the "plus" ends of microtubule tracks within cells. Work done in a broad range of eukaryotic cells has revealed that heterotrimeric kinesin-2 is the primary motor protein driving the intra-flagellar transport of tubulins and other axonemal building blocks from the base of the ciliary/flagellar axoneme to their site of assembly at the distal tips. This process is required for cilium assembly/maintenance and cilium-based signalling which play key roles in various cell and developmental processes. For example, in vertebrate embryos, kinesin-2 function is required for cilia-dependent nodal flow and the development of left-right asymmetry.

Overview

Product Name	Anti-KIF3A Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-KIF3A Antibody Picoband™ catalog # PB9654. Tested in WB applications. This antibody reacts with Human, Mouse, Rat.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store 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 freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q9Y496

Technical Details

Immunogen	E.coli-derived human KIF3A recombinant protein (Position: D485-Q699). Human KIF3A shares 97.7% amino acid (aa) sequence identity with mouse KIF3A.
Predicted Reactive Species	Bovine
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

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Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

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Anti-KIF3A Antibody Picoband™ (PB9654) Images

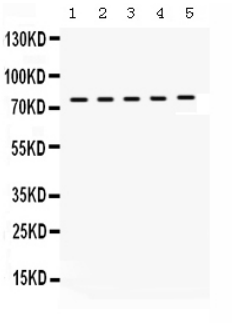

Figure 1. Western blot analysis of KIF3A using anti-KIF3A antibody (PB9654).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
Lane 1: Rat Brain Tissue Lysate at 50ug,
Lane 2: Rat Testis Tissue Lysate at 50ug,
Lane 3: Mouse Brain Tissue Lysate at 50ug,
Lane 4: Mouse Testis Tissue Lysate at 50ug,
Lane 5: MCF-7 Whole Cell Lysate at 40ug.
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-KIF3A antigen affinity purified polyclonal antibody (Catalog # PB9654) 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 KIF3A at approximately 80 kDa. The expected band size for KIF3A is at 80 kDa.