

Anti-PLK1 Antibody Picoband™ (monoclonal, 6D11)

Catalog Number: M00182

About PLK1

Serine/threonine-protein kinase PLK1, also known as polo-like kinase 1 (PLK-1) or serine/threonine-protein kinase 13 (STPK13), is an enzyme that in humans is encoded by the PLK1 (polo-like kinase 1) gene. Plk1 is an early trigger for G2/M transition. It supports the functional maturation of the centrosome in late G2/early prophase and establishment of the bipolar spindle. Also, Plk1 phosphorylates and activates cdc25C, a phosphatase that dephosphorylates and activates the cyclinB/cdc2 complex. Studies have shown that the loss of PLK1 expression can induce pro-apoptotic pathways and inhibit growth. Based on yeast and murine studies of meiosis, human PLK1 may also have a regulatory function in meiosis.

Overview

Product Name	Anti-PLK1 Antibody Picoband™ (monoclonal, 6D11)
Reactive Species	Human, Monkey
Description	Boster Bio Anti-PLK1 Antibody Picoband™ (monoclonal, 6D11) catalog # M00182. Tested in WB applications. This antibody reacts with Human, Monkey.
Application	WB
Clonality	Monoclonal 6D11
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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	Mouse
Uniprot ID	P53350

Technical Details

Immunogen	E.coli-derived human PLK1 recombinant protein (Position: K86-N430). Human PLK1 shares 95.4% and 96.2% amino acid (aa) sequence identity with mouse and rat PLK1, respectively.
Predicted Reactive Species	Hepatitis Virus
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
Form	Lyophilized
Concentration	0

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

Anti-PLK1 Antibody Picoband™ (monoclonal, 6D11) (M00182) Images

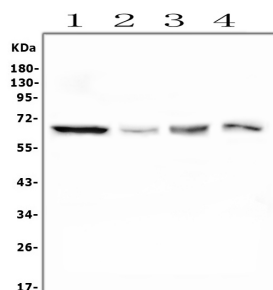


Figure 1. Western blot analysis of PLK1 using anti-PLK1 antibody (M00182).

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 50ug of sample under reducing conditions.

Lane 1: human Hela whole cell lysates

Lane 2: monkey COS-7 whole cell lysates

Lane 3: human Raji whole cell lysates

Lane 4: human U2OS whole cell lysates

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.

Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-PLK1 antigen affinity purified monoclonal antibody (Catalog # M00182) 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-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for PLK1 at approximately 68KD. The expected band size for PLK1 is at 68KD.

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