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Anti-14-3-3 zeta/delta/YWHAZ Antibody Picoband™ (monoclonal, 6G5)

Catalog # ABO14956

Product Information

Application	WB, FC
Primary Accession	P63104
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Rat, Human, Mouse, Monkey
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-14-3-3 zeta/delta/YWHAZ Antibody Picoband™ (monoclonal, 6G5) . Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	7534
Other Names	14-3-3 protein zeta/delta, Protein kinase C inhibitor protein 1, KCIP-1, YWHAZ
Calculated MW	27745
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Monkey, Rat Flow Cytometry, 1-3 □g/1x10^6 cells, Human
Subcellular Localization	Cytoplasm. Melanosome.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Clone Names	Clone: 6G5
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human 14-3-3 zeta/delta, which shares 97.8% amino acid (aa) sequence identity with both mouse and rat 14-3-3 zeta/delta.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross-reactivity with other proteins.
Storage	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.

Protein Information

Name	YWHAZ
Function	Adapter protein implicated in the regulation of a large spectrum of both general and specialized signaling pathways (PubMed:14578935, PubMed:15071501, PubMed:15644438, PubMed:16376338, PubMed:16959763, PubMed:31024343, PubMed:9360956). Binds to a large number of partners, usually by recognition of a phosphoserine or phosphothreonine motif (PubMed:35662396). Binding generally results in the modulation of the activity of the binding partner (PubMed:35662396). Promotes cytosolic retention and inactivation of TFEB transcription factor by binding to phosphorylated TFEB (PubMed:35662396). Induces ARHGEF7 activity on RAC1 as well as lamellipodia and membrane ruffle formation (PubMed:16959763). In neurons, regulates spine maturation through the modulation of ARHGEF7 activity (By similarity).
Cellular Location	Cytoplasm. Melanosome. Note=Located to stage I to stage IV melanosomes.

Background

14-3-3 protein zeta/delta (14-3-3ζ) is a protein that in humans is encoded by the YWHAZ gene on chromosome 8. This gene product belongs to the 14-3-3 family of proteins which mediate signal transduction by binding to phosphoserine-containing proteins. This highly conserved protein family is found in both plants and mammals, and this protein is 99% identical to the mouse, rat and sheep orthologs. The encoded protein interacts with IRS1 protein, suggesting a role in regulating insulin sensitivity. Several transcript variants that differ in the 5' UTR but that encode the same protein have been identified for this gene.

Images

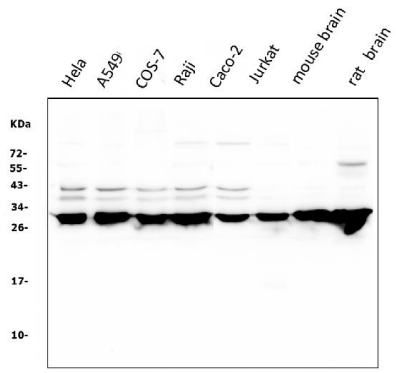


Figure 1. Western blot analysis of 14-3-3 zeta/delta using anti-14-3-3 zeta/delta antibody (M01141). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates;
Lane 2: human A549 whole cell lysates;
Lane 3: monkey COS-7 whole cell lysates;
Lane 4: human Raji whole cell lysates;
Lane 5:huamn Caco-2 whole cell lysates;
Lane 6: huamn Jurkat whole cell lysates;
Lane 7: mouse brain tissue lysates;
Lane 8: rat brain tissue 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-14-3-3 zeta/delta antigen affinity purified monoclonal antibody (Catalog # M01141) at 0.5 µg/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 14-3-3 zeta/delta at approximately 28KD. The expected band size for 14-3-3 zeta/delta is at 28KD.

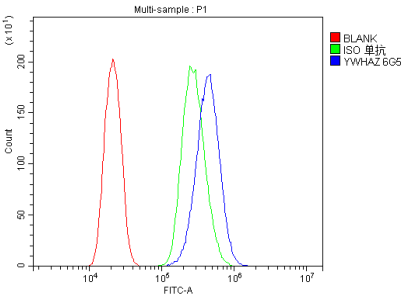


Figure 2. Flow Cytometry analysis of PC-3 cells using anti-14-3-3 zeta/delta antibody (M01141).
Overlay histogram showing PC-3 cells stained with M01141 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-14-3-3 zeta/delta Antibody (M01141,1 µg/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

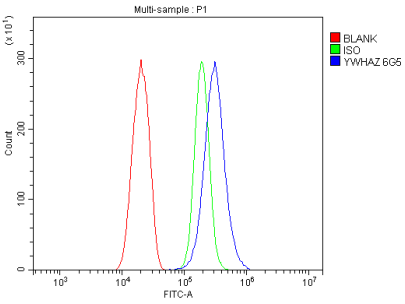


Figure 3. Flow Cytometry analysis of SiHa cells using anti-14-3-3 zeta/delta antibody (M01141).
Overlay histogram showing SiHa cells stained with M01141 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-14-3-3 zeta/delta Antibody (M01141,1 µg/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.