

**Anti-14-3-3 zeta/delta/YWHAZ Antibody Picoband™ (monoclonal, 6G5)**  
**Catalog # ABO14956****Specification****Anti-14-3-3 zeta/delta/YWHAZ Antibody Picoband™ (monoclonal, 6G5) - Product Information**

Application	WB, FC
Primary Accession	<a href="#">P63104</a>
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.

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

**Gene ID** 7534

**Other Names**

14-3-3 protein zeta/delta, Protein kinase C inhibitor protein 1, KCIP-1, YWHAZ

**Calculated MW**

28 kDa KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Monkey, Rat<br> Flow Cytometry, 1-3 µg/1x10<sup>6</sup> cells, Human<br>

**Subcellular Localization**

Cytoplasm. Melanosome.

**Contents**

Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg NaN<sub>3</sub>.

**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.**

**Anti-14-3-3 zeta/delta/YWHAZ Antibody Picoband™ (monoclonal, 6G5) - Protein Information****Name YWHAZ****Function**

Adapter protein implicated in the regulation of a large spectrum of both general and specialized signaling pathways (PubMed:<a href="http://www.uniprot.org/citations/14578935" target="\_blank">14578935</a>, PubMed:<a href="http://www.uniprot.org/citations/15071501" target="\_blank">15071501</a>, PubMed:<a href="http://www.uniprot.org/citations/15644438" target="\_blank">15644438</a>, PubMed:<a href="http://www.uniprot.org/citations/16376338" target="\_blank">16376338</a>, PubMed:<a href="http://www.uniprot.org/citations/16959763" target="\_blank">16959763</a>, PubMed:<a href="http://www.uniprot.org/citations/31024343" target="\_blank">31024343</a>, PubMed:<a href="http://www.uniprot.org/citations/9360956" target="\_blank">9360956</a>). Binds to a large number of partners, usually by recognition of a phosphoserine or phosphothreonine motif (PubMed:<a href="http://www.uniprot.org/citations/35662396" target="\_blank">35662396</a>). Binding generally results in the modulation of the activity of the binding partner (PubMed:<a href="http://www.uniprot.org/citations/35662396" target="\_blank">35662396</a>). Promotes cytosolic retention and inactivation of TFEB transcription factor by binding to phosphorylated TFEB (PubMed:<a href="http://www.uniprot.org/citations/35662396" target="\_blank">35662396</a>). Induces ARHGEF7 activity on RAC1 as well as lamellipodia and membrane ruffle formation (PubMed:<a href="http://www.uniprot.org/citations/16959763" target="\_blank">16959763</a>). In neurons, regulates spine maturation through the modulation of ARHGEF7 activity (By similarity).

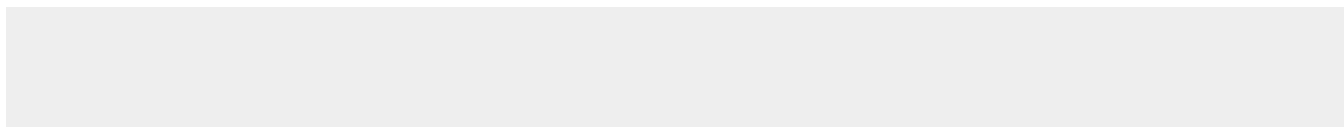
**Cellular Location**

Cytoplasm. Melanosome. Note=Located to stage I to stage IV melanosomes.

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

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

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

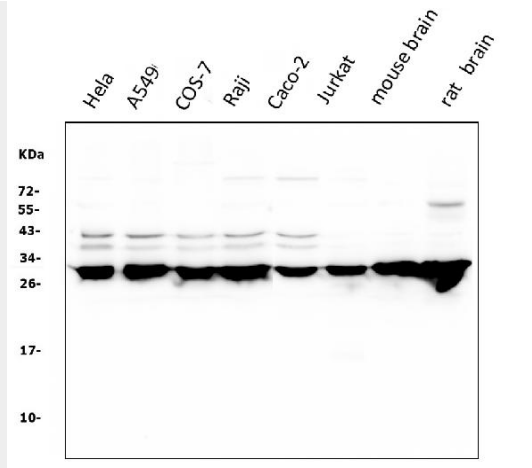


Figure 1. Western blot analysis of 14-3-3 zeta/delta using anti-14-3-3 zeta/delta antibody (M01141).

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: human Caco-2 whole cell lysates;
- Lane 6: human 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.

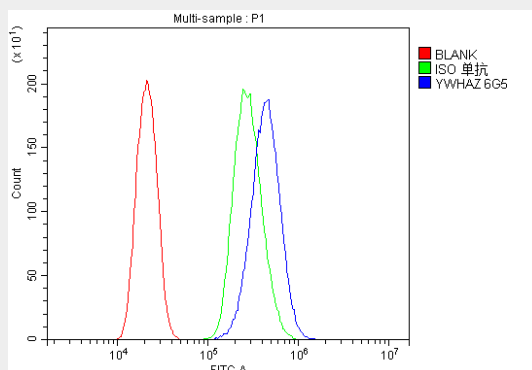


Figure 2. Flow Cytometry analysis of PC-3 cells using anti-14-3-3 zeta/delta antibody (M01141). Overlay histogram showing PC-3 cells stained with M01141 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-14-3-3 zeta/delta Antibody (M01141, 1 µg/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

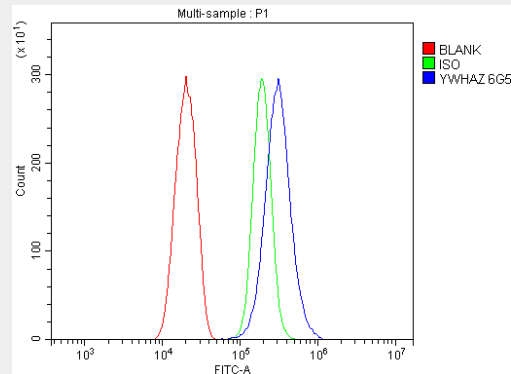


Figure 3. Flow Cytometry analysis of SiHa cells using anti-14-3-3 zeta/delta antibody (M01141). Overlay histogram showing SiHa cells stained with M01141 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-14-3-3 zeta/delta Antibody (M01141, 1  $\mu$ g/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10  $\mu$ g/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1  $\mu$ g/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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

14-3-3 protein zeta/delta (14-3-3 $\zeta$ ) 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.