10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-GRB10 Antibody Picoband™ (monoclonal, 5H7)

Catalog # ABO15041

Specification

Anti-GRB10 Antibody Picoband™ (monoclonal, 5H7) - Product Information

Application	**WB, FC**
Primary Accession	Q13322
Host	**Mouse**
Isotype	**Mouse IgG1**
Reactivity	**Rat, Human, Monkey**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-GRB10 Antibody Picoband™ (monoclonal, 5H7) . Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Monkey, Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-GRB10 Antibody Picoband™ (monoclonal, 5H7) - Additional Information

Gene ID 2887

Other Names
Growth factor receptor-bound protein 10, GRB10 adapter protein, Insulin receptor-binding protein Grb-IR, GRB10, GRBIR, KIAA0207

Calculated MW
67 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human, Monkey, Rat
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.

Immunogen
E.coli-derived human GRB10 recombinant protein (Position: M1-K251).

Purification
Immunogen affinity purified.

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.**

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-GRB10 Antibody Picoband™ (monoclonal, 5H7) - Protein Information

Name GRB10

Synonyms GRBIR, KIAA0207

Function
Adapter protein which modulates coupling of a number of cell surface receptor kinases with specific signaling pathways. Binds to, and suppress signals from, activated receptors tyrosine kinases, including the insulin (INSR) and insulin-like growth factor (IGF1R) receptors. The inhibitory effect can be achieved by 2 mechanisms: interference with the signaling pathway and increased receptor degradation. Delays and reduces AKT1 phosphorylation in response to insulin stimulation. Blocks association between INSR and IRS1 and IRS2 and prevents insulin-stimulated IRS1 and IRS2 tyrosine phosphorylation. Recruits NEDD4 to IGF1R, leading to IGF1R ubiquitination, increased internalization and degradation by both the proteasomal and lysosomal pathways. May play a role in mediating insulin-stimulated ubiquitination of INSR, leading to proteasomal degradation. Negatively regulates Wnt signaling by interacting with LRP6 intracellular portion and interfering with the binding of AXIN1 to LRP6. Positive regulator of the KDR/VEGFR-2 signaling pathway. May inhibit NEDD4-mediated degradation of KDR/VEGFR-2.

Cellular Location
Cytoplasm. Note=When complexed with NEDD4 and IGF1R, follows IGF1R internalization, remaining associated with early endosomes. Uncouples from IGF1R-containing endosomes before the sorting of the receptor to the lysosomal compartment (By similarity).

Tissue Location
Widely expressed in fetal and adult tissues, including fetal and postnatal liver, lung, kidney, skeletal muscle, heart, spleen, skin and brain.

Anti-GRB10 Antibody Picoband™ (monoclonal, 5H7) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-GRB10 Antibody Picoband™ (monoclonal, 5H7) - Images

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

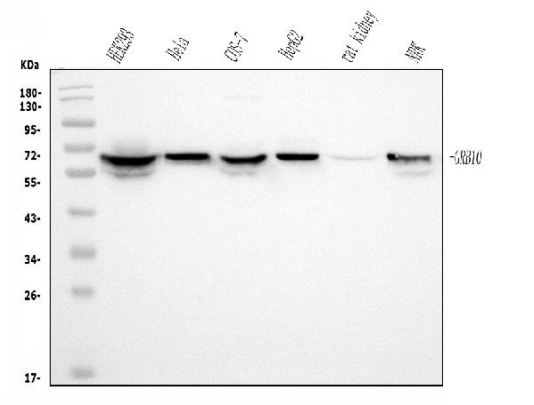

Figure 1. Western blot analysis of GRB10 using anti-GRB10 antibody (M01663).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30ug of sample under reducing conditions.
Lane 1: human Hek293 whole cell lysates,
Lane 2: human Hela whole cell lysates,
Lane 3: monkey COS-7 whole cell lysates,
Lane 4: human HepG2 whole cell lysates,
Lane 5: rat kidney tissue lysates,
Lane 6: rat NRK 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-GRB10 antigen affinity purified monoclonal antibody (Catalog # M01663) 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 GRB10 at approximately 67KD. The expected band size for GRB10 is at 67KD.

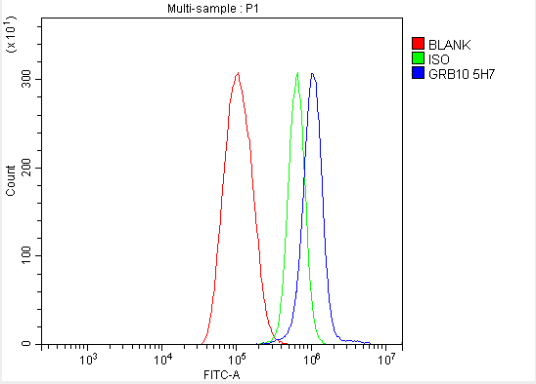

Figure 2. Flow Cytometry analysis of THP-1 cells using anti-GRB10 antibody (M01663).
Overlay histogram showing THP-1 cells stained with M01663 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-GRB10 Antibody (M01663, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-GRB10 Antibody Picoband™ (monoclonal, 5H7) - Background

GRB10, Growth factor receptor-bound protein 10, also known as insulin receptor-binding protein Grb-IR is a protein that in humans is encoded by the GRB10 gene. The product of this gene belongs

to a small family of adapter proteins that are known to interact with a number of receptor tyrosine kinases and signaling molecules. This gene encodes a growth factor receptor-binding protein that interacts with insulin receptors and insulin-like growth-factor receptors (e.g., IGF1R and IGF2R). Overexpression of some isoforms of the encoded protein inhibits tyrosine kinase activity and results in growth suppression. This gene is imprinted in a highly isoform- and tissue-specific manner. Alternatively spliced transcript variants encoding different isoforms have been identified.