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GRB10 Antibody
Catalog # ASC11443

Specification

GRB10 Antibody - Product Information

Application	**WB, IF**
Primary Accession	Q13322
Other Accession	NP_005302, 48762679
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**GRB10 antibody can be used for detection of GRB10 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunofluorescence starting at 20 µg/mL. For immunofluorescence start at 20 µg/mL.**

GRB10 Antibody - Additional Information

Gene ID **2887**

Target/Specificity
GRB10; At least three isoforms of GRB10 are known to exist; this antibody will detect all three isoforms.

Reconstitution & Storage
GRB10 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
GRB10 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

GRB10 Antibody - 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).

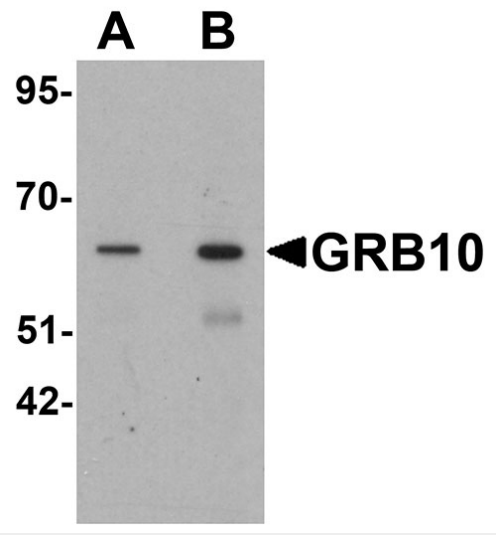
Tissue Location
Widely expressed in fetal and adult tissues, including fetal and postnatal liver, lung, kidney, skeletal muscle, heart, spleen, skin and brain.

GRB10 Antibody - 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

GRB10 Antibody - Images



Western blot analysis of GRB10 in SK-N-SH cell lysate with GRB10 antibody at (A) 1 and (B) 2 µg/mL.

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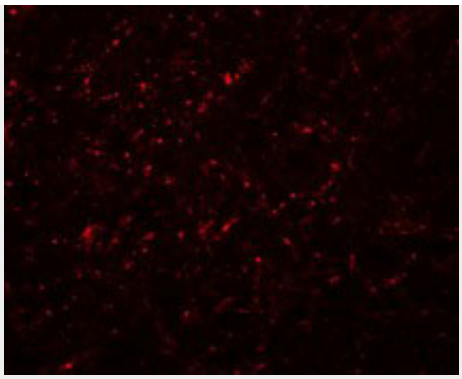

Immunofluorescence of GRB10 in rat brain cells with GRB10 antibody at 20 µg/mL.

GRB10 Antibody - Background

GRB10 Antibody: GRB10 belongs to a small family of adapter proteins that are known to interact with a number of receptor tyrosine kinases and signaling molecules and function in diverse cellular processes. GRB10 is a growth factor receptor-binding protein that interacts with insulin receptors and insulin-like growth-factor receptors. Overexpression of some isoforms of GRB10 inhibits tyrosine kinase activity and results in growth suppression. GRB10 can also interact with the L isoform of the proapoptotic protein Bim. This gene is imprinted in a highly isoform- and tissue-specific manner, with expression observed from the paternal allele in the brain, and from the maternal allele in the placental trophoblasts.

GRB10 Antibody - References

Morrione A. Grb10 proteins in insulin-like growth factor and insulin receptor signaling (review). Int. J. Mol. Med. 2000; 5:151-4.
Liu F and Roth RA. Grb-IR: a SH2-domain-containing protein that binds to the insulin receptor and inhibits its function. Proc. Natl. Acad. Sci. USA 1995; 92:10287-91.
Wick KR, Werner ED, Langlais P, et al. Grb10 inhibits insulin-stimulated insulin receptor substrate (IRS)-phosphatidylinositol 3-kinase/Akt signaling pathway by disrupting the association of IRS-1/IRS-2 with the insulin receptor. J. Biol. Chem. 2003; 278:8460-7.
Hu ZQ, Zhang JY, Ji CN, et al. Grb10 interacts with Bim L and inhibits apoptosis. Mol. Biol. Rep. 2010; 37:3547-52.