

Anti-HOMER3 Antibody Picoband™ (monoclonal, 9G13)

Catalog # ABO14892

Product Information

Application	WB, FC
Primary Accession	Q9NSC5
Host	Mouse
Isotype	Mouse IgG2a
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-HOMER3 Antibody Picoband™ (monoclonal, 9G13) . Tested in Flow Cytometry, WB applications. This antibody reacts with Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500 µg/ml.

Additional Information

Gene ID	9454
Other Names	Homer protein homolog 3, Homer-3, HOMER3 (HGNC:17514)
Calculated MW	39836
Application Details	Western blot, 0.1-0.5 µg/ml, Human Flow Cytometry, 1-3 µg/1x10 ⁶ cells, Human
Subcellular Localization	postsynaptic density; Cytoplasm; synapse
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Clone Names	Clone: 9G13
Immunogen	E. coli-derived human HOMER3 recombinant protein (Position: R282-A360). Human HOMER3 shares 88.6% and 89.9% amino acid (aa) sequence identity with mouse and rat HOMER3, respectively.
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	HOMER3 (HGNC:17514)
Function	Postsynaptic density scaffolding protein. Binds and cross- links cytoplasmic regions of GRM1, GRM5, ITPR1, DNM3, RYR1, RYR2, SHANK1 and SHANK3. By physically linking GRM1 and GRM5 with ER- associated ITPR1 receptors, it aids the coupling of surface receptors to intracellular calcium release. Isoforms can be differently regulated and may play an important role in maintaining the plasticity at glutamatergic synapses. Negatively regulates T cell activation by inhibiting the calcineurin-NFAT pathway. Acts by competing with calcineurin/PPP3CA for NFAT protein binding, hence preventing NFAT activation by PPP3CA (PubMed: 18218901).
Cellular Location	Cytoplasm. Postsynaptic density. Synapse. Note=Postsynaptic density of neuronal cells.

Background

Homer protein homolog 3 is a protein that in humans is encoded by the HOMER3 gene. This gene encodes a member of the HOMER family of postsynaptic density scaffolding proteins that share a similar domain structure consisting of an N-terminal Enabled/vasodilator-stimulated phosphoprotein homology 1 domain which mediates protein-protein interactions, and a carboxy-terminal coiled-coil domain and two leucine zipper motifs that are involved in self-oligomerization. The encoded protein binds numerous other proteins including group I metabotropic glutamate receptors, inositol 1,4,5-trisphosphate receptors and amyloid precursor proteins and has been implicated in diverse biological functions such as neuronal signaling, T-cell activation and trafficking of amyloid beta peptides.

Images

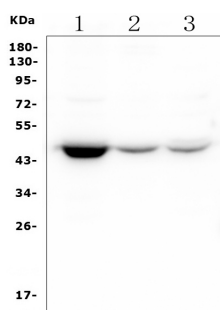


Figure 1. Western blot analysis of HOMER3 using anti-HOMER3 antibody (M09145).

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 U-87MG tissue lysates,

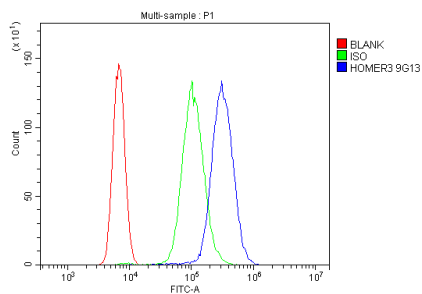
Lane 2: human Hela whole cell lysates,

Lane 3: human Caco-2 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-IL-32 antigen affinity purified polyclonal antibody (Catalog # M09145) 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 HOMER3 at approximately 45KD. The expected band size for HOMER3 is at 40KD.

Figure 2. Flow Cytometry analysis of U937 cells using anti-HOMER3 antibody M09145).

Overlay histogram showing U937 cells stained with M09145 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse



anti-HOMER3 Antibody (M09145, 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.

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