

AMIGO2 (G-7): sc-373699

BACKGROUND

The amphoterin-induced gene and ORF (AMIGO) family of proteins consists of AMIGO1, AMIGO2 and AMIGO3. All three members are single pass type I membrane proteins that contain several leucine-rich repeats, one IgG domain and a transmembrane domain. The AMIGO proteins are specifically expressed on fiber tracts of neuronal tissues and participate in their formation. AMIGO proteins can form complexes with each other, but can also bind themselves. AMIGO1, also designated Alivin 2, promotes growth and fasciculation of neurites and plays a role in myelination and fasciculation of developing neural axons. In cerebellar neurons, AMIGO2 (Alivin 1) is crucial for depolarization-dependent survival. Similar to AMIGO1 and AMIGO2, AMIGO3 (Alivin 3) plays a role in homophilic and/or heterophilic cell-cell interaction and signal transduction.

CHROMOSOMAL LOCATION

Genetic locus: AMIGO2 (human) mapping to 12q13.11; Amigo2 (mouse) mapping to 15 F1.

SOURCE

AMIGO2 (G-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 142-171 near the N-terminus of AMIGO2 of human origin.

PRODUCT

Each vial contains 200 µg IgA kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373699 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

AMIGO2 (G-7) is recommended for detection of AMIGO2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AMIGO2 siRNA (h): sc-60164, AMIGO2 siRNA (m): sc-60165, AMIGO2 shRNA Plasmid (h): sc-60164-SH, AMIGO2 shRNA Plasmid (m): sc-60165-SH, AMIGO2 shRNA (h) Lentiviral Particles: sc-60164-V and AMIGO2 shRNA (m) Lentiviral Particles: sc-60165-V.

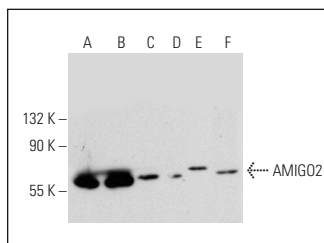
Molecular Weight of AMIGO2: 66 kDa.

Positive Controls: Y79 cell lysate: sc-2240, NIH/3T3 whole cell lysate: sc-2210 or K-562 whole cell lysate: sc-2203.

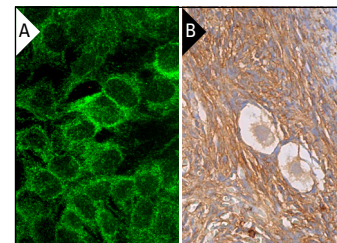
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BPHRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



AMIGO2 (G-7): sc-373699. Western blot analysis of AMIGO2 expression in Y79 (A), K-562 (B), NIH/3T3 (C), JC (D), RIN-m5F (E) and C6 (F) whole cell lysates.



AMIGO2 (G-7): sc-373699. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic staining of follicle cells and ovarian stroma cells (B).

SELECT PRODUCT CITATIONS

- Kanda, Y., et al. 2017. AMIGO2-upregulation in tumour cells facilitates their attachment to liver endothelial cells resulting in liver metastases. *Sci. Rep.* 7: 43567.
- MacLean, M., et al. 2021. Microglia RAGE exacerbates the progression of neurodegeneration within the SOD1^{G93A} murine model of amyotrophic lateral sclerosis in a sex-dependent manner. *J. Neuroinflammation* 18: 139.
- Liu, Y., et al. 2021. *In vivo* selection of highly metastatic human ovarian cancer sublines reveals role for AMIGO2 in intra-peritoneal metastatic regulation. *Cancer Lett.* 503: 163-173.
- Goto, K., et al. 2022. Establishment of an antibody specific for AMIGO2 improves immunohistochemical evaluation of liver metastases and clinical outcomes in patients with colorectal cancer. *Diagn. Pathol.* 17: 16.
- Luchena, C., et al. 2022. A neuron, microglia, and astrocyte triple co-culture model to study Alzheimer's disease. *Front. Aging Neurosci.* 14: 844534.
- Han, Z., et al. 2022. Integrated analysis reveals prognostic value and progression-related role of AMIGO2 in prostate cancer. *Transl. Androl. Urol.* 11: 914-928.

RESEARCH USE

For research use only, not for use in diagnostic procedures.