SANTA CRUZ BIOTECHNOLOGY, INC.

AF-6 (G-7): sc-398370

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The dynamics of a cell-cell interface such as tight junctions or adherens junctions are important in many developmental, physiological, and pathological processes. AF-6 (MLLT4: myeloid/lymphoid or mixed-lineage leukemia trans-located to 4) is a 1,612 amino acid protein that contains two N-terminal Ras binding domains (RBD) and a GLGF motif, and is implicated in Ras-mediated signaling events occurring at peripheral cell-cell junctions. AF-6 interacts with F-Actin and Profilin in cell-cell junctions, and may modulate Actin modeling near adhesion complexes. Furthermore, AF-6 coordinates junction adhesion molecule (JAM) recruitment to intercellular junctions through a PDZ domain. Developing mice deficient in AF-6 activity display a loss of neuroepithelial polarity, suggesting that AF-6 activity is an important regulator of cell-cell junctions that influence apical/basolateral asymmetry.

REFERENCES

1. Prasad, R., et al. 1993. Cloning of the ALL-1 fusion partner, the AF-6 gene, involved in acute myeloid leukemias with the t(6;11) chromosome translocation. Cancer Res. 53: 5624-5628.
2. Kuriyama, M., et al. 1996. Identification of AF-6 and canoe as putative targets for Ras. J. Biol. Chem. 271: 607-610.
3. Yamamoto, T., et al. 1997. The Ras target AF-6 interacts with ZO-1 and serves as a peripheral component of tight junctions in epithelial cells. J. Cell Biol. 139: 785-795.
4. Zhadanov, A.B., et al. 1999. Absence of the tight junctional protein AF-6 disrupts epithelial cell-cell junctions and cell polarity during mouse development. Curr. Biol. 9: 880-888.
5. Boettner, B., et al. 2000. The junctional multidomain protein AF-6 is a binding partner of the Rap1A GTPase and associates with the Actin cytoskeletal regulator Profilin. Proc. Natl. Acad. Sci. USA 97: 9064-9069.
6. Ebnet, K., et al. 2000. Junctional adhesion molecule interacts with the PDZ domain-containing proteins AF-6 and ZO-1. J. Biol. Chem. 275: 27979-27988.

CHROMOSOMAL LOCATION

Genetic locus: MLLT4 (human) mapping to 6q27; Mllt4 (mouse) mapping to 17 A1.

SOURCE

AF-6 (G-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1565-1592 near the C-terminus of AF-6 of human origin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

Each vial contains 200 µg IgM 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-398370 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

AF-6 (G-7) is recommended for detection of AF-6 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AF-6 siRNA (h): sc-43007, AF-6 siRNA (m): sc-43008, AF-6 shRNA Plasmid (h): sc-43007-SH, AF-6 shRNA Plasmid (m): sc-43008-SH, AF-6 shRNA (h) Lentiviral Particles: sc-43007-V and AF-6 shRNA (m) Lentiviral Particles: sc-43008-V.

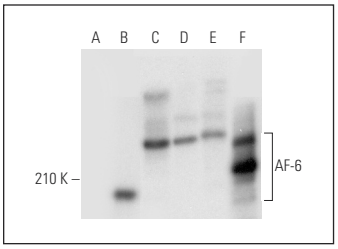
Molecular Weight of AF-6: 200 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, AF-6 (m): 293 Lysate: sc-178260 or PC-12 cell lysate: sc-2250.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (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.

DATA



AF-6 (G-7): sc-398370. Western blot analysis of AF-6 expression in non-transfected 293: sc-110760 (**A**), mouse AF-6 transfected 293: sc-178260 (**B**), SK-N-MC (**C**), Hep G2 (**D**), PC-12 (**E**) and NIH/3T3 (**F**) whole cell lysates.

RESEARCH USE

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