SANTA CRUZ BIOTECHNOLOGY, INC.

AF-6 (P-18): sc-14808

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 translocated to 4) is a 1,612 amino acid protein that contains 2 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 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of AF-6 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14808 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

AF-6 (P-18) is recommended for detection of AF-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

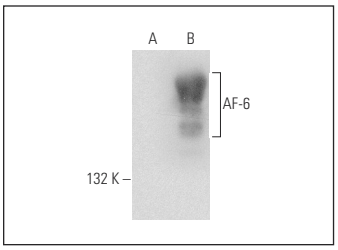
AF-6 (P-18) is also recommended for detection of AF-6 in additional species, including canine.

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, IMR-32 cell lysate: sc-2409 or AF-6 (m): 293 Lysate: sc-178260.

DATA



AF-6 (P-18): sc-14808. Western blot analysis of AF-6 expression in non-transfected: sc-110760 (**A**) and mouse AF-6 transfected: sc-178260 (**B**) 293 whole cell lysates.

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 or our catalog for detailed protocols and support products.