

DAAM1 (N-17): sc-55930

BACKGROUND

DAAM1 (dishevelled associated activator of morphogenesis 1) is a 1,078 amino acid member of the formin homology protein family. Localized to the perinuclear cytoplasm and expressed throughout the body, DAAM1 binds to dishevelled (Dvl) and Rho and mediates the Wnt-induced formation of the Dvl-Rho complex. Once complexed to Dvl, Rho becomes activated and can regulate cell polarity, movement and cytoskeletal architecture. Activation of Rho is dependent upon formation of the Dvl-Rho complex. This suggests that DAAM1 (which is required for complex formation) is a critical component of cellular cortex functions. DAAM1 contains several binding domains which allow it to interact with various proteins such as CIP4, FBNP1 and spectrin, thereby helping to coordinate the dynamics of the Actin filament system. Additionally, DAAM1 is thought to act as a scaffolding protein by recruiting Rho-GEF and Rho-GDP, thus enhancing Rho-GTP formation. Three distinct isoforms exist due to alternative splicing events.

REFERENCES

- Habas, R., et al. 2002. Wnt/Frizzled activation of Rho regulates vertebrate gastrulation and requires a novel formin homology protein DAAM1. *Cell* 107: 843-854.
- Kida, Y., et al. 2004. Identification of chick and mouse DAAM1 and DAAM2 genes and their expression patterns in the central nervous system. *Brain Res. Dev. Brain Res.* 153: 143-150.
- Nakaya, M.A., et al. 2004. Identification and comparative expression analyses of DAAM genes in mouse and *Xenopus*. *Gene Expr. Patterns* 5: 97-105.
- Moseley, J.B., et al. 2006. Formin proteins: purification and measurement of effects on Actin assembly. *Methods Enzymol.* 406: 215-234.
- Aspenström, P., et al. 2006. The diaphanous-related formin DAAM1 collaborates with the Rho GTPases Rho A and Cdc42, CIP4 and Src in regulating cell morphogenesis and Actin dynamics. *Exp. Cell Res.* 312: 2180-2194.

CHROMOSOMAL LOCATION

Genetic locus: DAAM1 (human) mapping to 14q23.1; Daam1 (mouse) mapping to 12 C3.

SOURCE

DAAM1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of DAAM1 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-55930 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

DAAM1 (N-17) is recommended for detection of DAAM1 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).

DAAM1 (N-17) is also recommended for detection of DAAM1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DAAM1 siRNA (h): sc-62190, DAAM1 siRNA (m): sc-62191, DAAM1 shRNA Plasmid (h): sc-62190-SH, DAAM1 shRNA Plasmid (m): sc-62191-SH, DAAM1 shRNA (h) Lentiviral Particles: sc-62190-V and DAAM1 shRNA (m) Lentiviral Particles: sc-62191-V.

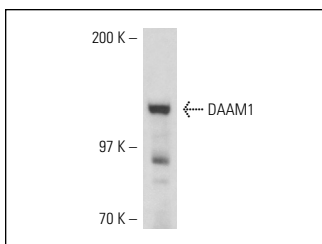
Molecular Weight of DAAM1: 123 kDa.

Positive Controls: mouse embryo brain tissue lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



DAAM1 (N-17): sc-55930. Western blot analysis of DAAM1 expression in mouse embryo brain tissue extract.

RESEARCH USE

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

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Try **DAAM1 (WW-3): sc-100942**, our highly recommended monoclonal alternative to DAAM1 (N-17).