SANTA CRUZ BIOTECHNOLOGY, INC.

DAAM1 (h): 293T Lysate: sc-116973

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 disheveled (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, FNBP1 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

1. Habas, R., Kato, Y. and He, X. 2002. Wnt/Frizzled activation of Rho regulates vertebrate gastrulation and requires a novel formin homology protein DAAM1. Cell 107: 843-854.
2. Kida, Y., Shiraishi, T. and Ogura, T. 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.
3. Nakaya, M.A., Habas, R., Biris, K., Kato, Y., He, X. and Yamaguchi, T.P. 2004. Identification and comparative expression analyses of DAAM genes in mouse and *Xenopus*. Gene Expr. Patterns 5: 97-105.
4. Moseley, J.B., Maiti, S. and Goode, B.L. 2006. Formin proteins: purification and measurement of effects on Actin assembly. Meth. Enzymol. 406: 215-234.
5. Aspenström, P., Richnau, N. and Johansson, A.S. 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.
6. Sato, A., Khadka, D.K., Liu, W., Bharti, R., Runnels, L.W., Dawid, I.B. and Habas, R. 2006. Profilin is an effector for DAAM1 in non-canonical Wnt signaling and is required for vertebrate gastrulation. Development 133: 4219-4231.

CHROMOSOMAL LOCATION

Genetic locus: DAAM1 (human) mapping to 14q23.1.

PRODUCT

DAAM1 (h): 293T Lysate represents a lysate of human DAAM1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

DAAM1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive DAAM1 antibodies. Recommended use: 10-20 µl per lane.

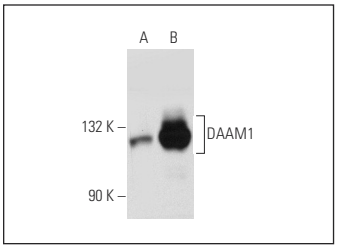
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

DAAM1 (WW-3): sc-100942 is recommended as a positive control antibody for Western Blot analysis of enhanced human DAAM1 expression in DAAM1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



DAAM1 (WW-3): sc-100942. Western blot analysis of DAAM1 expression in non-transfected: sc-117752 (**A**) and human DAAM1 transfected: sc-116973 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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