SANTA CRUZ BIOTECHNOLOGY, INC.

DOCK 11 (K-15): sc-74611

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Small GTPases of the Rho family, Rho, Rac, and Cdc42, are critical regulators of the Actin cytoskeleton and many other cellular processes. Rho GTPases are activated by Dbl-homology (DH)-domain-containing guanine nucleotide exchange factors (GEFs). DOCK 11 (dedicator of cytokinesis 11), also known as ACG or ZIZ2 (Zizimin-2), is a 2,073 amino acid protein belonging to the DOCK family of cytokinesis-regulating proteins that is mainly expressed in peripheral blood leukocytes. DOCK 11 functions as a GEF that binds and activates Cdc42 by exchanging bound GDP for free GTP. Cdc42 mediates cell polarity, gene expression, cell cycle progression and cell-cell contacts. Similar to other DOCK family members, DOCK 11 contains a PH domain and two internal DOCK homology regions designated DHR1 and DHR2.

REFERENCES

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2. Meller, N., et al. 2004. The novel Cdc42 guanine nucleotide exchange factor, Zizimin-1, dimerizes via the Cdc42-binding CZH2 domain. J. Biol. Chem. 279: 37470-37476.
3. Nishikimi, A., et al. 2005. Zizimin-2: a novel, DOCK 180-related Cdc42 guanine nucleotide exchange factor expressed predominantly in lymphocytes. FEBS Lett. 579: 1039-1046.
4. Lin, Q., et al. 2006. Identification of a DOCK 180-related guanine nucleotide exchange factor that is capable of mediating a positive feedback activation of Cdc42. J. Biol. Chem. 281: 35253-35262.
5. Chien, W.M., et al. 2007. Differential gene expression of p27Kip1 and Rb knockout pituitary tumors associated with altered growth and angiogenesis. Cell Cycle 6: 750-757.
6. Miyamoto, Y., et al. 2007. DOCK 6, a DOCK-C subfamily guanine nucleotide exchanger, has the dual specificity for Rac 1 and Cdc42 and regulates neurite outgrowth. Exp. Cell Res. 313: 791-804.
7. Almstrup, K., et al. 2007. Improved gene expression signature of testicular carcinoma *in situ*. Int. J. Androl. 30: 292-303.
8. Yelo, E., et al. 2008. DOCK 10, a novel CZH protein selectively induced by interleukin-4 in human B lymphocytes. Mol. Immunol. 45: 3411-3418.
9. Verstraelen, S., et al. 2009. Gene profiles of a human bronchial epithelial cell line after *in vitro* exposure to respiratory (non-)sensitizing chemicals: identification of discriminating genetic markers and pathway analysis. Toxicology 255: 151-159.

CHROMOSOMAL LOCATION

Genetic locus: DOCK11 (human) mapping to Xq24; Dock11 (mouse) mapping to X A3.2.

STORAGE

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

SOURCE

DOCK 11 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DOCK 11 of mouse 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-74611 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DOCK 11 (K-15) is recommended for detection of DOCK 11 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

DOCK 11 (K-15) is also recommended for detection of DOCK 11 in additional species, including equine and bovine.

Suitable for use as control antibody for DOCK 11 siRNA (h): sc-77168, DOCK 11 siRNA (m): sc-77169, DOCK 11 shRNA Plasmid (h): sc-77168-SH, DOCK 11 shRNA Plasmid (m): sc-77169-SH, DOCK 11 shRNA (h) Lentiviral Particles: sc-77168-V and DOCK 11 shRNA (m) Lentiviral Particles: sc-77169-V.

Molecular Weight of DOCK 11: 238 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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