

DOCK 10 (E-15): sc-107525

BACKGROUND

DOCK 10 (dedicator of cytokinesis 10), also known as ZIZ3 or DRIP2, is a 2,183 amino acid protein that belongs to the DOCK family of cytokinesis-regulating proteins and contains one PH domain, one DHR-1 domain and one DHR-2 domain. Expressed at lower levels in lung and brain tissue, DOCK 10 functions as a potential GEF (guanine nucleotide exchange factor) that is able to activate target GTPases by exchanging bound GDP for free GTP. Multiple isoforms of DOCK 10 exist due to alternative splicing events. The gene encoding DOCK 10 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

REFERENCES

1. Côte, J.F. and Vuori, K. 2002. Identification of an evolutionarily conserved superfamily of DOCK 180-related proteins with guanine nucleotide exchange activity. *J. Cell Sci.* 115: 4901-4913.
2. 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.
3. Fluge, F., et al. 2006. Gene expression in poorly differentiated papillary thyroid carcinomas. *Thyroid* 16: 161-175.
4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611518. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Gadea, G., et al. 2008. DOCK 10-mediated Cdc42 activation is necessary for amoeboid invasion of melanoma cells. *Curr. Biol.* 18: 1456-1465.
6. Yelo, E., et al. 2008. DOCK 10, a novel C2H protein selectively induced by interleukin-4 in human B lymphocytes. *Mol. Immunol.* 45: 3411-3418.

CHROMOSOMAL LOCATION

Genetic locus: DOCK10 (human) mapping to 2q36.2; Dock10 (mouse) mapping to 1 C4.

SOURCE

DOCK 10 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DOCK 10 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107525 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

DOCK 10 (E-15) is recommended for detection of DOCK 10 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 10 (E-15) is also recommended for detection of DOCK 10 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DOCK 10 siRNA (h): sc-94778, DOCK 10 siRNA (m): sc-143134, DOCK 10 shRNA Plasmid (h): sc-94778-SH, DOCK 10 shRNA Plasmid (m): sc-143134-SH, DOCK 10 shRNA (h) Lentiviral Particles: sc-94778-V and DOCK 10 shRNA (m) Lentiviral Particles: sc-143134-V.

Molecular Weight of DOCK 10: 249 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.

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.