

DOCK 2 (E-15): sc-50921

BACKGROUND

The DOCK2 gene encodes dedicator of cytokinesis 2 (DOCK 2), a hematopoietic cell-specific CDM family protein that is indispensable for lymphocyte chemotaxis. DOCK 2 participates in the cytoskeletal rearrangements that are required for lymphocyte migration in response of chemokines. This peripheral membrane protein activates Rac 1 and Rac 2 small GTPases, while presumably acting as a guanine nucleotide exchange factor (GEF), which exchanges bound GDP for free GTP. DOCK 2 may also participate in IL-2 transcriptional activation through the activation of Rac 2. DOCK 2 contains one DHR-1 (CZH-1) domain, one DHR-2 (CZH-2) domain and one SH3 domain. The DHR-2 domain is a putative GEF activity mediator. The DOCK 2 protein also co-localizes with F-Actin, and demonstrates expression in several human tissues, with the highest levels observed in peripheral blood leukocytes, thymus, spleen and liver.

REFERENCES

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- Sanui, T., et al. 2003. DOCK 2 is essential for antigen-induced translocation of TCR and lipid rafts, but not PKC τ and LFA-1, in T cells. *Immunity* 19: 119-129.
- Nombela-Arrieta, C., et al. 2004. Differential requirements for DOCK 2 and phosphoinositide-3-kinase γ during T and B lymphocyte homing. *Immunity* 21: 429-441.
- Jiang, H., et al. 2005. Deletion of DOCK 2, a regulator of the Actin cytoskeleton in lymphocytes, suppresses cardiac allograft rejection. *J. Exp. Med.* 202: 1121-1130.
- Kunisaki, Y., et al. 2006. DOCK 2 is required in T cell precursors for development of V α 14 NK T cells. *J. Immunol.* 176: 4640-4645.
- Shulman, Z., et al. 2006. DOCK 2 regulates chemokine-triggered lateral lymphocyte motility but not transendothelial migration. *Blood* 108: 2150-2158.

CHROMOSOMAL LOCATION

Genetic locus: DOCK2 (human) mapping to 5q35.1; Dock2 (mouse) mapping to 11 A4.

SOURCE

DOCK 2 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DOCK 2 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-50921 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DOCK 2 (E-15) is recommended for detection of DOCK 2 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 2 (E-15) is also recommended for detection of DOCK 2 in additional species, including equine and canine.

Suitable for use as control antibody for DOCK2 siRNA (h): sc-60545, DOCK2 siRNA (m): sc-60546, DOCK2 shRNA Plasmid (h): sc-60545-SH, DOCK2 shRNA Plasmid (m): sc-60546-SH, DOCK2 shRNA (h) Lentiviral Particles: sc-60545-V and DOCK2 shRNA (m) Lentiviral Particles: sc-60546-V.

Molecular Weight of DOCK 2: 220 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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.

SELECT PRODUCT CITATIONS

- Schymeinsky, J., et al. 2007. Syk-mediated translocation of PI3K δ to the leading edge controls lamellipodium formation and migration of leukocytes. *PLoS ONE* 2: e1132.

RESEARCH USE

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



Try **DOCK 2 (E-7): sc-365242**, our highly recommended monoclonal alternative to DOCK 2 (E-15).