

# DOCK 180 (H-4): sc-13163

## BACKGROUND

The v-Crk oncogene product shares homologous amino acid sequences, designated Src homology region 2 (SH2) and SH3, with many molecules involved in signal transduction. The v-Crk cellular homolog, c-Crk, is a member of a newly emerging class of genes including Nck and GRB2/ASH which encode proteins that consist primarily of SH2 and SH3 domains. Two distinct human c-Crk cDNAs, designated Crk I and Crk II, have been identified and shown to represent alternative splice products of c-Crk. The major translational product of c-Crk I has been identified as a variably expressed protein, while c-Crk II encodes a widely expressed protein and a more variably expressed protein. The major c-Crk transforming activity appears associated with c-Crk I p28 expression. DOCK 180, a protein downstream of Crk, has been identified as a major Crk-associated protein. When DOCK 180 is recruited to the plasma membrane from a cytoplasmic reservoir, presumably by Crk, changes in cellular morphology and spindle formation occur, suggesting DOCK 180 to be a Crk effector molecule.

## CHROMOSOMAL LOCATION

Genetic locus: DOCK1 (human) mapping to 10q26.2; Dock1 (mouse) mapping to 7 F3.

## SOURCE

DOCK 180 (H-4) is a mouse monoclonal antibody raised against amino acids 1700-1769 of DOCK 180 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DOCK 180 (H-4) is available conjugated to agarose (sc-13163 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13163 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13163 PE), fluorescein (sc-13163 FITC), Alexa Fluor® 488 (sc-13163 AF488), Alexa Fluor® 546 (sc-13163 AF546), Alexa Fluor® 594 (sc-13163 AF594) or Alexa Fluor® 647 (sc-13163 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13163 AF680) or Alexa Fluor® 790 (sc-13163 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

DOCK 180 (H-4) is recommended for detection of DOCK 180 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

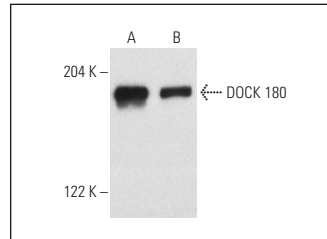
Suitable for use as control antibody for DOCK 180 siRNA (h): sc-35207, DOCK 180 siRNA (m): sc-35208, DOCK 180 shRNA Plasmid (h): sc-35207-SH, DOCK 180 shRNA Plasmid (m): sc-35208-SH, DOCK 180 shRNA (h) Lentiviral Particles: sc-35207-V and DOCK 180 shRNA (m) Lentiviral Particles: sc-35208-V.

Molecular Weight of DOCK 180: 180 kDa.

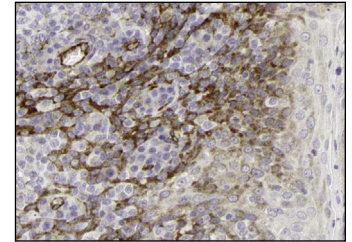
## STORAGE

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

## DATA



DOCK 180 (H-4): sc-13163. Western blot analysis of DOCK 180 expression in H4 (A) and HeLa (B) whole cell lysates.



DOCK 180 (H-4): sc-13163. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing membrane and cytoplasmic staining of non-follicle cells and surface epithelial cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## SELECT PRODUCT CITATIONS

- Katoh, H., et al. 2003. Rho G activates Rac 1 by direct interaction with the DOCK 180-binding protein Elmo. *Nature* 424: 461-464.
- Handa, Y., et al. 2007. Shigella IpgB1 promotes bacterial entry through the ELMO-DOCK 180 machinery. *Nat. Cell Biol.* 9: 121-128.
- Komander, D., et al. 2008. An  $\alpha$ -helical extension of the ELMO1 pleckstrin homology domain mediates direct interaction to DOCK 180 and is critical in Rac signaling. *Mol. Biol. Cell* 19: 4837-4851.
- Hu, B., et al. 2009. ADP-ribosylation factor 6 regulates glioma cell invasion through the IQ-domain GTPase-activating protein 1-Rac1-mediated pathway. *Cancer Res.* 69: 794-801.
- Wang, H., et al. 2010. The role of Crk/DOCK 180/Rac1 pathway in the malignant behavior of human ovarian cancer cell SKOV3. *Tumour Biol.* 31: 59-67.
- Patel, M., et al. 2011. The Arf family GTPase Arl4A complexes with Elmo proteins to promote actin cytoskeleton remodeling and reveals a versatile Ras-binding domain in the Elmo proteins family. *J. Biol. Chem.* 286: 38969-38979.
- Liu, X.L., et al. 2013. Increased expression of DOCK 180 protein in the noninfarcted myocardium in rats. *J. Chin. Med. Assoc.* 76: 164-168.
- Feng, H., et al. 2014. EGFRvIII stimulates glioma growth and invasion through PKA-dependent serine phosphorylation of DOCK 180. *Oncogene* 33: 2504-2512.
- Kim, T.Y., et al. 2015. Substrate trapping proteomics reveals targets of the  $\beta$ TrCP2/FBXW11 ubiquitin ligase. *Mol. Cell. Biol.* 35: 167-181.

## RESEARCH USE

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

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