

# DOCK 8 (H-159): sc-292124

## BACKGROUND

DOCK 8 (dedicator of cytokinesis 8) is a 2,099 amino acid protein that contains one DHR-2 (CZH-2) domain and one DHR-1 (CZH-1) domain. One of several members of the DOCK180 family of cytokinesis-regulating proteins, DOCK 8 functions as a guanine nucleotide exchange factor (GEF) that may play a role in protein activation and is thought to influence Actin organization. Defects in the gene encoding DOCK 8 are associated with the pathogenesis of autosomal dominant mental retardation (MRD2), possibly due to errors in Actin-based cytoskeletal structure. Mutations in this gene also result in the autosomal recessive form of the hyper-IgE syndrome, a rare disorder characterized by immunodeficiency, recurrent infections, eczema, increased serum IgE, eosinophilia and lack of connective tissue and skeletal involvement. Multiple isoforms of DOCK 8 exist due to alternative splicing events. The gene encoding DOCK 8 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome.

## REFERENCES

1. Ruusala, A., et al. 2004. Isolation and characterisation of DOCK8, a member of the DOCK180-related regulators of cell morphology. *FEBS Lett.* 572: 159-166.
2. Griggs, B.L., et al. 2008. Dedicator of cytokinesis 8 is disrupted in two patients with mental retardation and developmental disabilities. *Genomics* 91: 195-202.
3. Zhang, Q., et al. 2009. Combined immunodeficiency associated with DOCK8 mutations. *N. Engl. J. Med.* 361: 2046-2055.
4. Jabara, H.H., et al. 2012. DOCK8 functions as an adaptor that links TLR-MyD88 signaling to B cell activation. *Nat. Immunol.* 13: 612-620.
5. Alsum, Z., et al. 2013. Clinical, immunological and molecular characterization of DOCK8 and DOCK8-like deficient patients: single center experience of twenty-five patients. *J. Clin. Immunol.* 33: 55-67.
6. Mizesko, M.C., et al. 2013. Defective actin accumulation impairs human natural killer cell function in patients with dedicator of cytokinesis 8 deficiency. *J. Allergy Clin. Immunol.* 131: 840-848.
7. Tóth, B., et al. 2013. Novel dedicator of cytokinesis 8 mutations identified by multiplex ligation-dependent probe amplification. *Eur. J. Haematol.* 91: 369-375.

## CHROMOSOMAL LOCATION

Genetic locus: DOCK8 (human) mapping to 9p24.3; Dock8 (mouse) mapping to 19 B.

## SOURCE

DOCK 8 (H-159) is a rabbit polyclonal antibody raised against amino acids 119-277 mapping near the N-terminus of DOCK 8 of human origin.

## PRODUCT

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

## APPLICATIONS

DOCK 8 (H-159) is recommended for detection of DOCK 8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other DOCK family members.

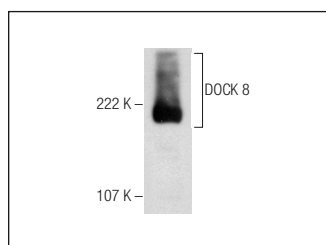
DOCK 8 (H-159) is also recommended for detection of DOCK 8 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DOCK 8 siRNA (h): sc-92764, DOCK 8 siRNA (m): sc-143137, DOCK 8 shRNA Plasmid (h): sc-92764-SH, DOCK 8 shRNA Plasmid (m): sc-143137-SH, DOCK 8 shRNA (h) Lentiviral Particles: sc-92764-V and DOCK 8 shRNA (m) Lentiviral Particles: sc-143137-V.

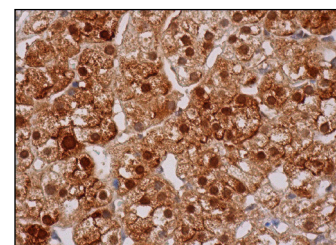
Molecular Weight of DOCK 8: 190 kDa.

Positive Controls: Raji whole cell lysate: sc-364236.

## DATA



DOCK 8 (H-159): sc-292124. Western blot analysis of DOCK 8 expression in Raji whole cell lysate.



DOCK 8 (H-159): sc-292124. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and nuclear staining of glandular cells.

## STORAGE

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

## RESEARCH USE

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



Try **DOCK 8 (G-2): sc-376911**, our highly recommended monoclonal alternatives to DOCK 8 (H-159). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **DOCK 8 (G-2): sc-376911**.