SANTA CRUZ BIOTECHNOLOGY, INC.

DOCK 8 (T-13): sc-104911

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The Power to Question

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 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DOCK 8 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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104911 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available azide-free for biological studies, sc-104911 L, 200 µg/0.1 ml.

APPLICATIONS

DOCK 8 (T-13) 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), 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 8 (T-13) is also recommended for detection of DOCK 8 in additional species, including 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.

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.