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DOCK8 Antibody

Catalog # ASC11810

Product Information

Application	WB, E, IHC-P
Primary Accession	Q8NF50
Other Accession	NP_982272, 238231392
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	238529
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	DOCK8 antibody can be used for detection of DOCK8 by Western blot at 1 - 2 g/ml. Antibody can also be used for Immunohistochemistry at 5 g/mL.

Additional Information

Gene ID	81704
Other Names	Dedicator of cytokinesis protein 8, DOCK8
Target/Specificity	DOCK8; DOCK8 antibody is human, mouse and rat reactive. Multiple isoforms of DOCK8 are known to exist.
Reconstitution & Storage	DOCK8 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	DOCK8 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DOCK8
Function	Guanine nucleotide exchange factor (GEF) which specifically activates small GTPase CDC42 by exchanging bound GDP for free GTP (PubMed:22461490, PubMed:28028151). During immune responses, required for interstitial dendritic cell (DC) migration by locally activating CDC42 at the leading edge membrane of DC (By similarity). Required for CD4(+) T-cell migration in response to chemokine stimulation by promoting CDC42 activation at T cell leading edge membrane (PubMed:28028151). Is involved in NK cell cytotoxicity by controlling polarization of microtubule-organizing center (MTOC), and possibly regulating CCDC88B-mediated lytic granule transport to MTOC during cell killing (PubMed:25762780).
Cellular Location	Cytoplasm. Cell membrane; Peripheral membrane protein; Cytoplasmic side.

	Cell projection, lamellipodium membrane; Peripheral membrane protein; Cytoplasmic side. Note=Enriched and co-localizes with GTPase CDC42 at the immunological synapse formed during T cell/antigen presenting cell cognate interaction. Translocates from the cytoplasm to the plasma membrane in response to chemokine CXCL12/SDF-1-alpha stimulation
Tissue Location	Expressed in peripheral blood mononuclear cells (PBMCs).

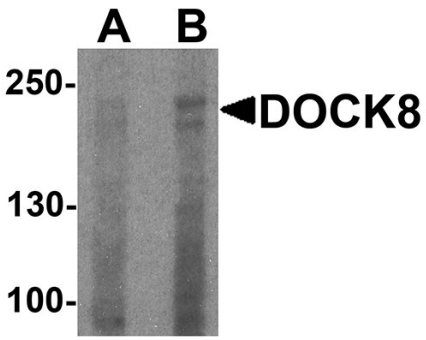
Background

The Dedicator of cytokinesis protein 8 (DOCK8) is a member of the DOCK180 family of guanine nucleotide exchange factors (1). DOCK8 plays an essential role in humoral immune responses and is important in the proper formation of the B cell immunological synapse (reviewed in 2). Mutations in this gene result in the autosomal recessive form of the hyper-IgE syndrome (3).

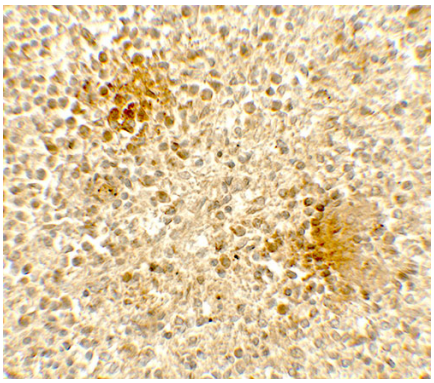
References

Ruusala A and Aspenstrom P. Isolation and characterisation of DOCK8, a member of the DOCK180-related regulators of cell morphology. FEBS Lett. 2004; 572:159-66.
Randall KL, Lambe T, Goodnow CC, et al. The essential role of DOCK8 in humoral immunity. Dis. Markers 2010; 29:141-50.
Engelhardt KR, McGhee S, Sinkler S, et al. Large deletions and point mutations involving the dedicator of cytokinesis 8 (DOCK8) in the autosomal recessive form of hyper-IgE syndrome. J. Allergy Clin. Immunol. 2009; 124:1289-302.

Images



Western blot analysis of DOCK8 in EL4 cell lysate with DOCK8 antibody at (A) 1 and (B) 2 µg/ml.



Immunohistochemistry of DOCK8 in human spleen tissue with DOCK8 antibody at 5 µg/mL.