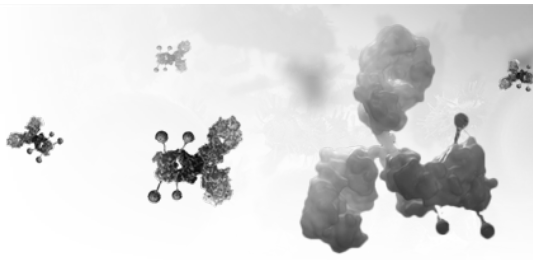

Mouse Anti-ARHGEF2 monoclonal antibody, clone 4D6 (CABT-RM118)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Specifically detects human Rho guanine nucleotide exchange factor 2 (GEF-H1).
Target	ARHGEF2
Immunogen	A linear peptide from the N-terminal region of human GEF-H1
Isotype	IgG1, κ
Source/Host	Mouse
Species Reactivity	Human
Clone	4D6
Purification	Protein G purified
Conjugate	unconjugated
Applications	WB
Molecular Weight	~111 kDa observed; 111.54 kDa calculated. Uncharacterized bands may be observed in some lysate(s).
Format	Liquid
Size	100 µg
Buffer	0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl
Preservative	0.05% sodium azide

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Storage	Stable for 1 year at 2-8°C from date of receipt.

BACKGROUND

Introduction	Rho guanine nucleotide exchange factor 2 is encoded by the ARHGEF2 gene in human. GEF-H1 is a microtubule-associated guanine nucleotide exchange factor (GEF) for the Rho family of small GTPases that activates Rho-GTPases by promoting the exchange of GDP for GTP. It localizes to the tips of cortical microtubules of the mitotic spindle during cell division and is released upon microtubule depolymerization. GEF-H1 is involved in epithelial barrier permeability, cell motility and polarization, dendritic spine morphology, antigen presentation, leukemic cell differentiation, cell cycle regulation, and innate immune response. GEF-H1 can act as an adaptor protein that links PP2A B subunits to KSR-1 and mediate the dephosphorylation of KSR-1 serine 392 and activate MAPK signaling. GEF-H1 I known to contributes to cell survival and growth in HRASV12- transformed cells and is reported to be essential for activation of MAP kinase pathway in response to HRASV12. It is also reported to be important for the growth and survival of HRASV12 transformed cells. GEF-H1 contains a DH (DBL-homology) domain (aa 235-432) that interacts with and promotes loading of GTP on RhoA and tyrosine phosphorylation of RIPK2. It also has two phorbol-ester/DAG-type zinc finger (aa 587-611) and the C-terminal coiled coil domains (aa 798-867), both of which are required for association with microtubules.
Keywords	ARHGEF2; Rho/Rac guanine nucleotide exchange factor (GEF) 2; GEF; P40; GEFH1; LFP40; GEF-H1; rho guanine nucleotide exchange factor 2; microtubule-regulated Rho-GEF; guanine nucleotide exchange factor H1; proliferating cell nucleolar antigen p40; Rho/Rac guanine nucleotide exchange factor 2

GENE INFORMATION

Entrez Gene ID	9181
UniProt ID	Q92974

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