Anti-Lfc antibody

Description	Rabbit polyclonal to Lfc.

Model	STJ93920
Host	Rabbit
Reactivity	Human
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human Lfc
Immunogen Region	360-440 aa, Internal
Gene ID	9181
Gene Symbol	ARHGEF2
Dilution range	WB 1:500-1:2000IHC 1:100-1:300ELISA 1:20000
Specificity	Lfc Polyclonal Antibody detects endogenous levels of Lfc protein.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Rho guanine nucleotide exchange factor 2 Guanine nucleotide exchange factor H1 GEF-H1 Microtubule-regulated Rho-GEF Proliferating cell nucleolar antigen p40
Molecular Weight	101 kDa
Clonality	Polyclonal
Conjugation	Unconjugated

Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:682OMIM:607560
Alternative Names	Rho guanine nucleotide exchange factor 2 Guanine nucleotide exchange factor H1 GEF-H1 Microtubule-regulated Rho-GEF Proliferating cell nucleolar antigen p40
Function	Activates Rho-GTPases by promoting the exchange of GDP for GTP. May be involved in epithelial barrier permeability, cell motility and polarization, dendritic spine morphology, antigen presentation, leukemic cell differentiation, cell cycle regulation, innate immune response, and cancer. Binds Rac-GTPases, but does not seem to promote nucleotide exchange activity toward Rac-GTPases, which was uniquely reported in PubMed:9857026. May stimulate instead the cortical activity of Rac. Inactive toward CDC42, TC10, or Ras-GTPases. Forms an intracellular sensing system along with NOD1 for the detection of microbial effectors during cell invasion by pathogens. Required for RHOA and RIP2 dependent NF-kappaB signaling pathways activation upon S.flexneri cell invasion. Involved not only in sensing peptidoglycan (PGN)-derived muropeptides through NOD1 that is independent of its GEF activity, but also in the activation of NF-kappaB by Shigella effector proteins (IpgB2 and OspB) which requires its GEF activity and the activation of RhoA. Involved in innate immune signaling transduction pathway promoting cytokine IL6/interleukin-6 and TNF-alpha secretion in macrophage upon stimulation by bacterial peptidoglycans; acts as a signaling intermediate between NOD2 receptor and RIPK2 kinase. Contributes to the tyrosine phosphorylation of RIPK2 through Src tyrosine kinase leading to NF-kappaB activation by NOD2.
Sequence and Domain Family	The DH (DBL-homology) domain interacts with and promotes loading of GTP on RhoA. Promotes tyrosine phosphorylation of RIPK2.; The PH domain has no affinity for phosphoinositides suggesting that it does not interact directly with membranes. The phorbol-ester/DAG-type zinc-finger and the C-terminal coiled-coil domains (606-986) are both important for association with microtubules.
Cellular Localization	Cytoplasm, cytoskeleton Cytoplasm Cell junction, tight junction Golgi apparatus Cytoplasm, cytoskeleton, spindle Cell projection, ruffle membrane Cytoplasmic vesicle. Localizes to the tips of cortical microtubules of the mitotic spindle during cell division, and is further released upon microtubule depolymerization . Recruited into membrane ruffles induced by S.flexneri at tight junctions of polarized epithelial cells . Colocalized with NOD2 and RIPK2 in vesicles and with the cytoskeleton .
Post-translational Modifications	Phosphorylation of Ser-886 by PAK1 induces binding to protein YWHAZ, promoting its relocation to microtubules and the inhibition of its activity. Phosphorylated by AURKA and CDK1 during mitosis, which negatively regulates its activity. Phosphorylation by MAPK1 or MAPK3 increases nucleotide exchange activity. Phosphorylation by PAK4 releases GEF-H1 from the microtubules. Phosphorylated on serine, threonine and tyrosine residues in a RIPK2-dependent manner.

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