



Rabbit Anti-GEF H1 antibody

SL4202R

Product Name:	GEF H1
Chinese Name:	Rho鸟苷酸交换因子2抗体
Alias:	Lbc11; Lfc; ARHG2; ARHG2_HUMAN; ARHGEF 2; ARHGEF-2; ARHGEF2; GEF; GEF H1; GEF-H1; GEFH1; Guanine nucleotide exchange factor H1; LFP40; Microtubule-regulated Rho-GEF; P40 antibody Proliferating cell nucleolar antigen p40; Protein GEF-H1; Rho guanine nucleotide exchange factor 2; rho/rac guanine nucleotide exchange factor (GEF) 2; rho/rac guanine nucleotide exchange factor 2; rho/rac guanine nucleotide exchange factor.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Cow,Horse,Rabbit,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	112kDa
Cellular localization:	cytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human GEF H1:21-120/986
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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, 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.

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, 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.

Subunit:

Interacts with 14-3-3 zeta; when phosphorylated at Ser-886. Interacts with the kinases PAK4, AURKA and MAPK1. Interacts with RHOA and RAC1. Interacts with NOD1. Interacts (via the N-terminal zinc finger) with CAPN6 (via domain II).

Subcellular Location:

Cytoplasm. Cell junction, tight junction. Golgi apparatus. Cytoplasm, cytoskeleton, spindle. Cell projection, ruffle membrane. Note=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.

Post-translational modifications:

Phosphorylation of Ser-886 by PAK1 induces binding to protein 14-3-3 zeta, promoting its relocation to microtubules and the inhibition of its activity. Phosphorylated by STK6 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.

Similarity:

Contains 1 DH (DBL-homology) domain.

Contains 1 PH domain.

Contains 1 phorbol-ester/DAG-type zinc finger.

SWISS:

Q92974

Gene ID:

9181

Database links:

[Entrez Gene: 9181](#)Human

[Entrez Gene: 16800](#)Mouse

[Entrez Gene: 310635](#)Rat

[Omim: 607560](#)Human

[SwissProt: Q92974](#)Human

[SwissProt: Q60875](#)Mouse

[SwissProt: Q5FVC2](#)Rat

[Unigene: 516790](#)Human

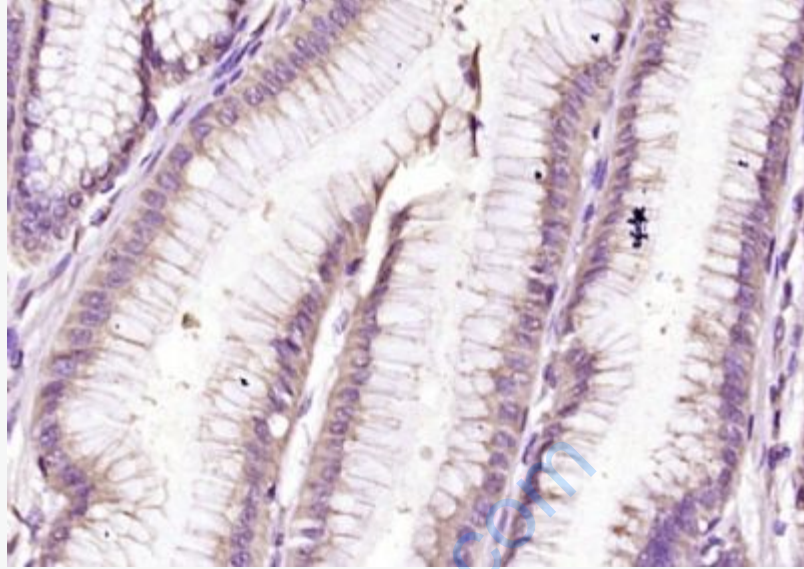
[Unigene: 239329](#)Mouse

[Unigene: 482396](#)Mouse

[Unigene: 12255](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Picture:

Paraformaldehyde-fixed, paraffin embedded (human gastric carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (GEF H1) Polyclonal Antibody, Unconjugated (SL4202R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.