SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-Ephexin-1 antibody

Catalog Number: SL11458R

FOR RESEARCH USE ONLY

[DATASHEET]

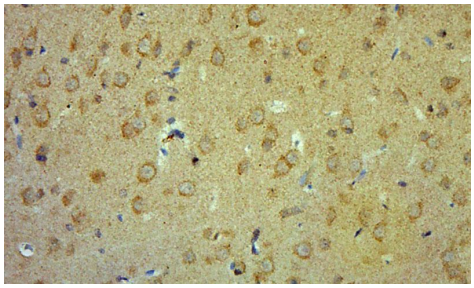
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Ephexin-1
Immunogen:	KLH conjugated synthetic peptide derived from human EPHEXIN: 451-550/710
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P (1:100-500) IHC-F (1:100-500) IF (1:100-500) Not yet tested in other applications. Optimal working dilutions must be determined by the end user.
Reactivity:	Mouse (predicted: Human, Rat, Pig, Cow, Chicken, Dog, Horse)
Predicted MW.:	82kDa
Subcellular Location:	cytoplasmic The cell membrane
Background:	EPHEXIN is a 710 amino acid protein that localizes to both the membrane and the cytoplasm and contains one SH3 domain, one PH domain and one DH domain. Expressed at high levels in brain and present at lower levels in lung tissue, EPHEXIN interacts with EphA4 and functions as a guanine nucleotide exchange factor (GEF) that is capable of activating Rho A, Rac 1 and Cdc42 and is thought to play a role in axon guidance and growth cone collapse. EPHEXIN is subject to Src-dependent phosphorylation, an event that increases the GEF activity of EPHEXIN toward Rho A. Human EPHEXIN, which exists as multiple alternatively spliced isoforms, shares a high degree of sequence homology with its mouse counterpart, suggesting a conserved role between species. **Function:** Acts as a guanine nucleotide exchange factor (GEF) which

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	differentially activates the GTPases RHOA, RAC1 and CDC42. Plays a role in axon guidance regulating ephrin-induced growth cone collapse. Upon activation by ephrin through EPHA4, the GEF activity switches toward RHOA resulting in its activation. Activated RHOA promotes cone retraction at the expense of RAC1-and CDC42-stimulated growth cone extension. **Subunit:** Interacts with CDK5R1 and EPHA4; activated by EPHA4 through the CDK5 kinase **Subcellular Location:** Cytoplasm. Membrane. Cell projection, growth cone. Associated with membranes. Localizes to axonal growth cones. **Tissue Specificity:** Highly expressed in brain specifically in caudate nucleus and to a lower extent in amygdala and hippocampus. Also detected in lung. **Post-translational modifications:** Src-dependent phosphorylation at Tyr-179 upon EPHA4 activation increases the guanine exchange factor activity toward RHOA. **Similarity:** Contains 1 DH (DBL-homology) domain. Contains 1 PH domain. Contains 1 SH3 domain. **Database links:** **Entrez Gene:** 25791 Human **Entrez Gene:** 53972 Mouse **Entrez Gene:** 246217 Rat **Entrez Gene:** 424744 Chicken Omim: 605991 Human **SwissProt:** Q8N5V2 Human **SwissProt:** Q8CHT1 Mouse **SwissProt:** Q5BKC9 Rat **Unigene:** 97316 Human **Unigene:** 435439 Mouse **Unigene:** 20670 Rat

[VALIDATION IMAGES]



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Figure 1. Paraformaldehyde-fixed, paraffin embedded (Mouse brain); 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 (Ephexin-1) Polyclonal Antibody, Unconjugated (SL11458R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

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