SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-Epac1 antibody

Catalog Number: SL8682R

FOR RESEARCH USE ONLY

[DATASHEET]

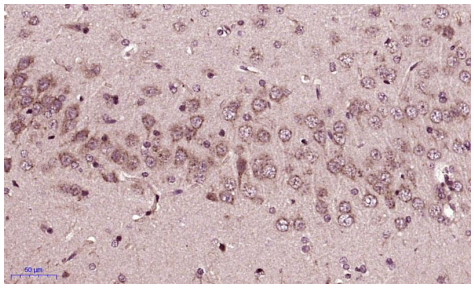
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Epac1
Immunogen:	KLH conjugated synthetic peptide derived from human Epac1: 301-400/923
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. 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 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Rat(predicted:Human,Mouse,Rabbit)
Predicted MW.:	99kDa
Subcellular Location:	The cell membrane
Background:	The activation of RaP1 by cAMP is independent of PKA and is mediated by recently discovered family of guanine nucleotide exchange factors (GEFs) called cAMP-GEFs or Epacs. The Epac signaling therefore represents a novel mechanism for cAMP signaling with in the cAMP cascade. There are 2 members of the Epac family, Epac1 and Epac 2. Both proteins are multidomain proteins containing an autoinhibitory cAMP-binding domain that inhibits the catalytic region and a DEP domain (dishevelled, Egl-10 and pleckstrin homology domain) targeting the membrane anchors. EPAC2 has an additional cAMP-binding site in its N-terminus that binds cAMP with low affinity. EPAC1 mRNA is broadly expressed, with particularly high levels occurring in the thyroid, ovary, kidney and certain brain regions, whereas expression of EPAC2 mRNA appears to be restricted to the brain and adrenal glands.

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

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	Epac 1 and Epac 2 also interact with light chain 2 (LC2) or MAP1A that serves as a scaffolding structure to stabilize the signal transduction complex. The Epac 1-selective antibodies were generated against unique antigenic sequences form near N-terminus and between RasGEFN and Ras GEF domains. The antibodies to Epac 1are affinity purified over immobilized antigen based chromatography. **Function:** Guanine nucleotide exchange factor (GEF) for RAP1A and RAP2A small GTPases that is activated by binding cAMP. Through simultaneous binding of PDE3B to RAPGEF3 and PIK3R6 is assembled in a signaling complex in which it activates the PI3K gamma complex and which is involved in angiogenesis. **Subunit:** Interacts with PDE3B. **Subcellular Location:** Endomembrane system **Tissue Specificity:** Widely expressed with highest levels in adult kidney, heart, thyroid and brain, and fetal kidney. **Similarity:** Contains 1 cyclic nucleotide-binding domain. Contains 1 DEP domain. Contains 1 N-terminal Ras-GEF domain. Contains 1 Ras-GEF domain. **Database links:** **Entrez Gene:** 10411 Human **Entrez Gene:** 223864 Mouse **Entrez Gene:** 59326 Rat Omim: 606057 Human **SwissProt:** O95398 Human **SwissProt:** Q8VCC8 Mouse **SwissProt:** Q9Z1C8 Rat **Unigene:** 8578 Human **Unigene:** 42899 Rat

[VALIDATION IMAGES]



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Paraformaldehyde-fixed, paraffin embedded (Rat 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 (Epac1) Polyclonal Antibody, Unconjugated (SL8682R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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