

AP55584PU-N**Polyclonal Antibody to EPAC1 (N-term) - Aff - Purified**

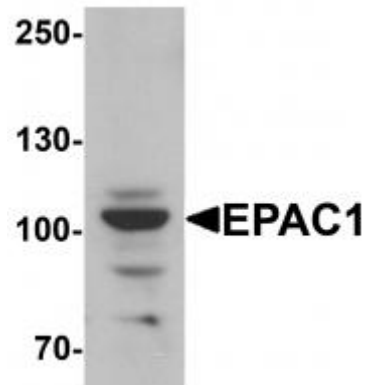
Alternate names:	RAPGEF3, Rap guanine nuclear exchange factor 3, bcm910, cAMPGEF-I
Quantity:	0.1 mg
Concentration:	1.0 mg/ml
Background:	EPAC1, also known as Rap guanine nuclear exchange factor 3 and cAMPGEF-I, is widely expressed but most prominently in brain, heart, kidney, pancreas, spleen, ovary, thyroid and spinal cord. EPAC1 is a cAMP-binding protein with intrinsic guanine nuclear exchange factor activity that couples cAMP production to the activation of Rap, a GTPase belonging to the Ras family. This activation of Rap influences numerous cellular processes such as integrin-mediated cell adhesion, vascular endothelial barrier formation, and cardiac myocyte gap junction formation. Recently, EPAC1 has been suggested to also be involved in the cAMP-dependent regulation of ion channel formation, intracellular Ca ⁺⁺ signalling, ion transporter activity, and exocytosis.
Uniprot ID:	A8K2G5
NCBI:	NP_659099
GenelD:	10411
Host / Isotype:	Rabbit / IgG
Immunogen:	18 amino acid synthetic peptide near the amino terminus of human EPAC1 (AP55584CP-N)
Format:	State: Liquid purified Ig fraction Purification: Affinity chromatography purified via peptide column Buffer System: PBS containing 0.02% Sodium Azide as preservative
Applications:	Western blot: 1-2 µg/ml. <i>Positive Control:</i> Rat skeletal muscle tissue lysate. Immunohistochemistry on Paraffin sections: Start at 2.5 µg/ml. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	At least two isoforms of EPAC1 are known to exist. This antibody will detect both isoforms and is predicted to not cross-react with EPAC2.
Species Reactivity:	Tested: Human, Mouse, Rat
Add. Information:	Blocking peptide available: AP55584CP-N
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
General Readings:	1. de Rooij J, Zwartkuis FJ, Verheijen MH, Cool RH, Nijman SM, Wittinghofer A, et al. Epac is a Rap1 guanine-nucleotide-exchange factor directly activated by cyclic AMP. <i>Nature</i> . 1998 Dec 3;396(6710):474-7. PubMed PMID: 9853756. 2. Bos JL. Epac: a new cAMP target and new avenues. <i>Hum. Immunol.</i> 2004;

65:282-90.

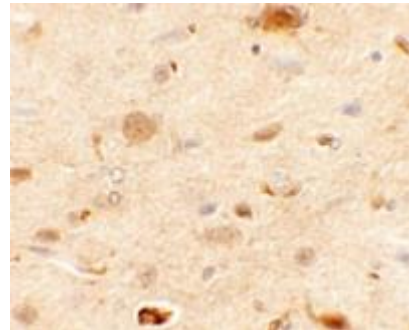
3. Holz GG, Kang G, Harbeck M, et al. Cell physiology of cAMP sensor Epac. *J. Physiol.* 2006; 577:5-15.

Pictures:

Western blot analysis of EPAC1 in rat skeletal muscle tissue lysate with EPAC1 antibody at 1 ug/mL.



Immunohistochemistry of EPAC1 in rat brain tissue with EPAC1 antibody at 2.5 ug/mL.



Immunofluorescence of EPAC1 in rat brain tissue with EPAC1 antibody at 20 ug/mL.

