

Anti-Epac1 antibody ab124162

[3 References](#) [3 Images](#)

Overview

Product name	Anti-Epac1 antibody
Description	Rabbit polyclonal to Epac1
Host species	Rabbit
Specificity	At least two isoforms of Epac1 are known to exist; this antibody will detect both isoforms. Epac1 antibody is predicted to not cross-react with Epac2.
Tested applications	Suitable for: WB, ICC/IF, IHC-P
Species reactivity	Reacts with: Rat
Immunogen	Synthetic peptide corresponding to 18 amino acids near the N-terminus of Human Epac1 (NP_659099).
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
Storage buffer	pH: 7.2 Preservative: 0.02% Sodium azide Constituent: 99% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab124162 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 - 2 µg/ml. Predicted molecular weight: 104 kDa.
ICC/IF		Use a concentration of 20 µg/ml.
IHC-P		Use at an assay dependent concentration.

Target

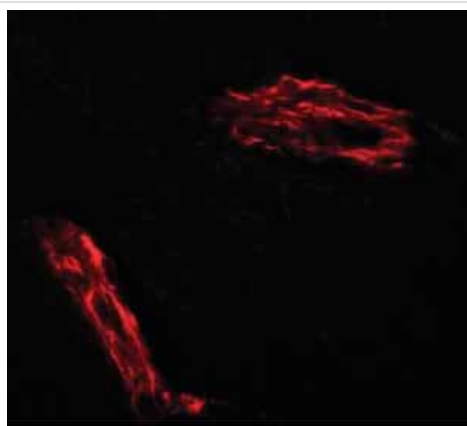
Relevance

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 within the cAMP cascade. There are 2 members of the Epac family, Epac1 and Epac2. 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. Epac1 and Epac2 also interact with light chain 2 (LC2) or MAP1A that serves as a scaffolding structure to stabilize the signal transduction complex. The Epac1-selective antibodies were generated against unique antigenic sequences from near N-terminus and between RasGEFN and Ras GEF domains. The antibodies to Epac1 are affinity purified over immobilized antigen based chromatography.

Cellular localization

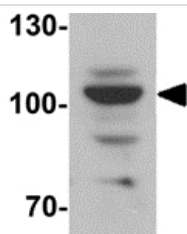
Endomembrane system

Images



Immunofluorescence of EPAC1 in rat brain tissue with ab124162 at 20 µg/mL.

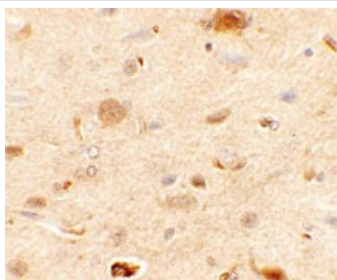
Immunocytochemistry/ Immunofluorescence - Anti-Epac1 antibody (ab124162)



Western blot - Anti-Epac1 antibody (ab124162)

Anti-Epac1 antibody (ab124162) at 1 µg/ml + Rat skeletal muscle tissue lysate at 15 µg

Predicted band size: 104 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Epac1 antibody (ab124162)

Immunohistochemical analysis of rat brain tissue, staining Epac1 with ab124162 at 2.5 µg/ml.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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