**BACKGROUND**

3',5' cyclic adenosine monophosphate (cAMP)-regulated guanine nucleotide exchange factors Epac1 (cAMP-GEF1) and Epac2 (cAMP-GEF2) activate the ras family GTPases Rap1 and Rap2 by promoting GTP binding in a cAMP-dependent manner. Eukaryotic cAMP is a second messenger that induces physiological responses such as gene expression, growth, differentiation, secretion and neurotransmission. Human EPAC2 contains at least 31 exons and maps to chromosome 2q31.1. The 4.4-kb Epac2 transcript is prominent in brain and adrenal gland. Within the brain, expression is strong in cortex, occipital pole, frontal lobe, temporal lobe, amygdala, putamen, hippocampus and cerebellum.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: RAPGEF4 (human) mapping to 2q31.1; Rapgef4 (mouse) mapping to 2 C3.

**SOURCE**

Epac2 (H-220) is a rabbit polyclonal antibody raised against amino acids 1-220 mapping at the N-terminus of Epac2 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

Epac2 (H-220) is recommended for detection of Epac2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (>2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Epac2 (H-220) is also recommended for detection of Epac2 in additional species, including canine, bovine, porcine and avian.


Molecular Weight of Epac2: 126 KDa.

Positive Controls: Mouse cerebellum extract: sc-2403, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

Epac2 (H-220): sc-25633. Western blot analysis of Epac2 expression in mouse brain (A) and mouse cerebellum (B) tissue extracts.

Epac2 (H-220): sc-25633. Immunoperoxidase staining of formalin-fixed, paraffin-embedded mouse brain tissue showing membrane localization (A). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (B).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

Try Epac2 (A-7): sc-28326 or Epac2 (C-6): sc-390690, our highly recommended monoclonal alternatives to Epac2 (H-220).