**BACKGROUND**

3’,5’ cyclic adenosine monophosphate (cAMP)-regulated guanine nucleotide exchange factors Epac (Epac1, cAMP-GEF1) and Epac2 (cAMP-GEFII) activate the Ras family GTPases Rap 1 and Rap 2 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. The human Epac gene maps to chromosome 12q13.11 with transcript being abundant in the kidney and heart. In situ hybridization indicates expression of Epac in adult rat brain and selective expression in neonatal brain, including septum and thalamus.

**CHROMOSOMAL LOCATION**

Genetic locus: RAPGEF3 (human) mapping to 12q13.11; Rapgef3 (mouse) mapping to 15 F1.

**SOURCE**

Epac (A-5) is a mouse monoclonal antibody raised against amino acids 1-70 of Epac of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with 0.1% sodium azide and 0.1% gelatin.

Epac (A-5) is available conjugated to agarose (sc-28366 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28366 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28366 PE), fluorescein (sc-28366 FITC), Alexa Fluor® 488 (sc-28366 AF488), Alexa Fluor® 546 (sc-28366 AF546), Alexa Fluor® 594 (sc-28366 AF594) or Alexa Fluor® 647 (sc-28366 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28366 AF680) or Alexa Fluor® 790 (sc-28366 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

Epac (A-5) is recommended for detection of Epac of mouse, rat, human and hamster origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 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).


Molecular Weight of Epac: 99 kDa.

Positive Controls: BcH1 cell lysate: sc-2299, EOC 20 whole cell lysate: sc-364187 or SK-N-MC cell lysate: sc-2237.

**STORAGE**

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

**DATA**


**SELECT PRODUCT CITATIONS**

**RESEARCH USE**

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