

# GAP1-InsP<sub>4</sub> BP (E-9): sc-398283

## BACKGROUND

Human GAP1-InsP<sub>4</sub> BP, also designated Ras p21 protein activator (GTPase-activating protein) 3 [Ins(1,3,4,5)P<sub>4</sub>-binding protein], is an 829 amino acid protein that binds phospholipids in both a calcium-dependent and -independent manner. GAP1, one of the Ras GTPase-activating protein families, comprises four distinct genes, including GAP1<sup>m</sup>, GAP1-InsP<sub>4</sub> BP, MRASAL (murine Ras GTPase-activating-like) and KIAA0538. This family contains an N-terminal tandem C2 domain, a GAP-related domain and a C-terminal Pleckstrin homology (PH) domain. The PH domains of GAP1-InsP<sub>4</sub> BP are essential for membrane targeting via binding of specific phospholipids. Following agonist-stimulated PtdIns(3,4,5)P<sub>3</sub> production, group I family PH domain containing proteins like GAP1-InsP<sub>4</sub> BP specifically bind inositol phosphates, which are subsequently targeted to the plasma membrane.

## REFERENCES

- Cozier, G.E., et al. 2000. GAP1-InsP<sub>4</sub> BP contains a novel group I pleckstrin homology domain that directs constitutive plasma membrane association. *J. Biol. Chem.* 275: 28261-28268.
- Cozier, G., et al. 2000. Molecular modeling and site-directed mutagenesis of the inositol 1,3,4,5-tetrakisphosphate-binding pleckstrin homology domain from the Ras GTPase-activating protein GAP1-InsP<sub>4</sub> BP. *Biochem. J.* 349: 333-342.
- Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605182. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: RASA3 (human) mapping to 13q34; Rasa3 (mouse) mapping to 8 A1.1.

## SOURCE

GAP1-InsP<sub>4</sub> BP (E-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 103-136 near the N-terminus of GAP1-InsP<sub>4</sub> BP of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GAP1-InsP<sub>4</sub> BP (E-9) is available conjugated to agarose (sc-398283 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398283 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398283 PE), fluorescein (sc-398283 FITC), Alexa Fluor® 488 (sc-398283 AF488), Alexa Fluor® 546 (sc-398283 AF546), Alexa Fluor® 594 (sc-398283 AF594) or Alexa Fluor® 647 (sc-398283 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398283 AF680) or Alexa Fluor® 790 (sc-398283 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398283 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

GAP1-InsP<sub>4</sub> BP (E-9) is recommended for detection of GAP1-InsP<sub>4</sub> BP of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

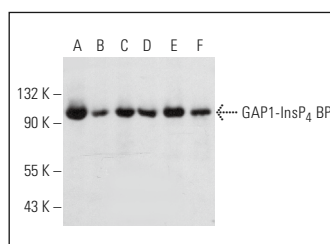
GAP1-InsP<sub>4</sub> BP (E-9) is also recommended for detection of GAP1-InsP<sub>4</sub> BP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GAP1-InsP<sub>4</sub> BP siRNA (h): sc-39023, GAP1-InsP<sub>4</sub> BP siRNA (m): sc-39024, GAP1-InsP<sub>4</sub> BP shRNA Plasmid (h): sc-39023-SH, GAP1-InsP<sub>4</sub> BP shRNA Plasmid (m): sc-39024-SH, GAP1-InsP<sub>4</sub> BP shRNA (h) Lentiviral Particles: sc-39023-V and GAP1-InsP<sub>4</sub> BP shRNA (m) Lentiviral Particles: sc-39024-V.

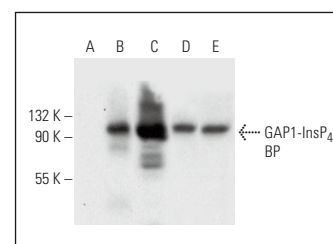
Molecular Weight of GAP1-InsP<sub>4</sub> BP: 97 kDa.

Positive Controls: GAP1-InsP<sub>4</sub> BP (h2): 293T Lysate: sc-115741, IMR-32 cell lysate: sc-2409 or HeLa whole cell lysate: sc-2200.

## DATA



GAP1-InsP<sub>4</sub> BP (E-9): sc-398283. Western blot analysis of GAP1-InsP<sub>4</sub> BP expression in CCRF-CEM (A), Jurkat (B), RAW 264.7 (C), EOC 20 (D), RBL-1 (E) and C6 (F) whole cell lysates.



GAP1-InsP<sub>4</sub> BP (E-9): sc-398283. Western blot analysis of GAP1-InsP<sub>4</sub> BP expression in non-transfected 293T: sc-117752 (A), human GAP1-InsP<sub>4</sub> BP transfected 293T: sc-115741 (B) whole cell lysates, human platelet extract (C), HeLa (D) and IMR-32 (E) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Wang, C., et al. 2021. Berberine and its main metabolite berberrubine inhibit platelet activation through suppressing the class I PI3Kβ/Rasa3/Rap1 pathway. *Front. Pharmacol.* 12: 734603.
- Ueda, Y., et al. 2023. Rap1 organizes lymphocyte front-back polarity via RhoA signaling and talin1. *iScience* 26: 107292.

## STORAGE

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

## RESEARCH USE

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