

GAP1-InsP₄ BP (h2): 293T Lysate: sc-115741

BACKGROUND

Human GAP1-InsP₄ BP, also designated Ras p21 protein activator (GTPase-activating protein) 3 [Ins(1,3,4,5)P₄-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(m), GAP1-InsP₄ 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-InsP₄ BP are essential for membrane targeting via binding of specific phospholipids. Following agonist-stimulated PtdIns(3,4,5)P₃ production, group I family PH domain containing proteins like GAP1-InsP₄ BP specifically bind inositol phosphates, which are subsequently targeted to the plasma membrane.

REFERENCES

- Cozier, G.E., et al. 2000. GAP1-InsP₄ 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-InsP₄ 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/>
- Minagawa, T., et al. 2001. Distinct phosphoinositide binding specificity of the GAP1 family proteins: characterization of the Pleckstrin homology domains of MRASAL and KIAA0538. *Biochem. Biophys. Res. Commun.* 288: 87-90.
- LocusLink Report (LocusID: 22821). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: RASA3 (human) mapping to 13q34.

PRODUCT

GAP1-InsP₄ BP (h2): 293T Lysate represents a lysate of human GAP1-InsP₄ BP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

GAP1-InsP₄ BP (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive GAP1-InsP₄ BP antibodies. Recommended use: 10-20 µl per lane.

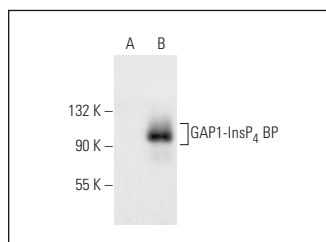
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GAP1-InsP₄ BP (E-7): sc-398127 is recommended as a positive control antibody for Western Blot analysis of enhanced human GAP1-InsP₄ BP expression in GAP1-InsP₄ BP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

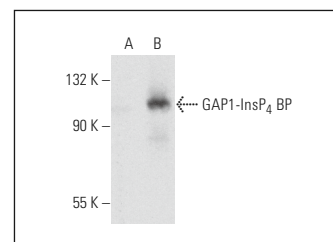
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



GAP1-InsP₄ BP (E-7): sc-398127. Western blot analysis of GAP1-InsP₄ BP expression in non-transfected: sc-117752 (A) and human GAP1-InsP₄ BP transfected: sc-115741 (B) 293T whole cell lysates.



GAP1-InsP₄ BP (E-3): sc-515684. Western blot analysis of GAP1-InsP₄ BP expression in non-transfected: sc-117752 (A) and human GAP1-InsP₄ BP transfected: sc-115741 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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