



GAP1-InsP₄ BP (h): 293T Lysate: sc-115700

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)P(3) 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

1. Cozier, G.E., Lockyer, P.J., Reynolds, J.S., Kupzig, S., Bottomley, J.R., Millard, T.H., Banting, G. and Cullen, P.J. 2000. GAP1-InsP₄ BP contains a novel group I Pleckstrin homology domain that directs constitutive plasma membrane association. *J. Biol. Chem.* 275: 28261-28268.
2. Cozier, G., Sessions, R., Bottomley, J.R., Reynolds, J.S. and Cullen, P.J. 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.
3. 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/>
4. Minagawa, T., Fukuda, M. and Mikoshiba, K. 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.
5. LocusLink Report (LocusID: 22821). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

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

PRODUCT

GAP1-InsP₄ BP (h): 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 (h): 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.

RESEARCH USE

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

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.

PROTOCOLS

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