

GRP1 (h2): 293T Lysate: sc-171938

BACKGROUND

GRP1 (general receptor for phosphoinositides-1) contains a Pleckstrin homology (PH) domain as well as a Sec7 domain. The PH domain has high binding affinity for phosphatidylinositol 3,4,5-trisphosphate (PtdIns(3,4,5)P₃), while the Sec7 homology domain is responsible for catalyzing guanine nucleotide exchange of ADP-ribosylation factor (ARF) proteins. GRP1 co-localizes with ARF6 and catalyzes GTP/GDP exchange on ARF6. It is known to interact with PtdIns(3,4,5)P₃ localized to the plasma membrane *in vitro* and may also be a PtdIns(3,4,5)P₃ receptor. Additionally, GRP1 may regulate protein sorting and membrane trafficking through interaction with the guanosine triphosphate ARF, and may control cell adhesion through interaction with integrins.

REFERENCES

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2. Klarlund, J.K., Rameh, L.E., Cantley, L.C., Buxton, J.M., Holik, J.J., Sakelis, C., Patki, V., Corvera, S. and Czech, M.P. 1998. Regulation of GRP1-catalyzed ADP ribosylation factor guanine nucleotide exchange by phosphatidylinositol 3,4,5-trisphosphate. *J. Biol. Chem.* 273: 1859-1862.
3. Venkateswarlu, K., Gunn-Moore, F., Oatey, P.B., Tavaré, J.M. and Cullen, P.J. 1998. Nerve growth factor- and epidermal growth factor-stimulated translocation of the ADP-ribosylation factor-exchange factor GRP1 to the plasma membrane of PC-12 cells requires activation of phosphatidylinositol 3-kinase and the GRP1 pleckstrin homology domain. *Biochem. J.* 335: 139-146.
4. Langille, S.E., Patki, V., Klarlund, J.K., Buxton, J.M., Holik, J.J., Chawla, A., Corvera, S. and Czech, M.P. 1999. ADP-ribosylation factor 6 as a target of guanine nucleotide exchange factor GRP1. *J. Biol. Chem.* 274: 27099-27104.

CHROMOSOMAL LOCATION

Genetic locus: CYTH3 (human) mapping to 7p22.1.

PRODUCT

GRP1 (h2): 293T Lysate represents a lysate of human GRP1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

GRP1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive GRP1 antibodies. Recommended use: 10-20 µl per lane.

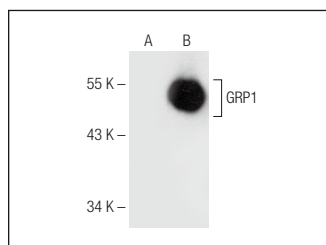
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GRP1 (A-10): sc-374437 is recommended as a positive control antibody for Western Blot analysis of enhanced human GRP1 expression in GRP1 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



GRP1 (A-10): sc-374437. Western blot analysis of GRP1 expression in non-transfected: sc-117752 (A) and human GRP1 transfected: sc-171938 (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.

PROTOCOLS

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