

GRP1 (m): 293T Lysate: sc-120646

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

1. Klarlund, J.K., et al. 1997. Signaling by phosphoinositide-3,4,5-trisphosphate through proteins containing Pleckstrin and Sec7 homology domains. *Science* 275: 1927-1930.
2. Klarlund, J.K., et al. 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., et al. 1998. Nerve growth factor- and epidermal growth factor-stimulated translocation of the ADP-ribosylation factor-exchange factor GRP1 to the plasma membrane of PC12 cells requires activation of phosphatidylinositol 3-kinase and the GRP1 pleckstrin homology domain. *Biochem. J.* 335: 139-146.
4. Langille, S.E., et al. 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 (mouse) mapping to 5 G2.

PRODUCT

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

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.

APPLICATIONS

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

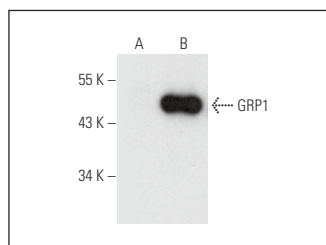
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GRP1 (E-8): sc-271740 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse GRP1 expression in GRP1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

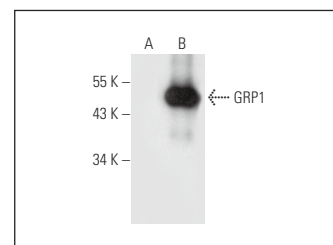
RECOMMENDED SUPPORT REAGENTS

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 (E-8): sc-271740. Western blot analysis of GRP1 expression in non-transfected: sc-117752 (A) and mouse GRP1 transfected: sc-120646 (B) 293T whole cell lysates.



GRP1 (A-3): sc-271741. Western blot analysis of GRP1 expression in non-transfected: sc-117752 (A) and mouse GRP1 transfected: sc-120646 (B) 293T whole cell lysates.

PROTOCOLS

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