SANTA CRUZ BIOTECHNOLOGY, INC.

GRP1 (C-20): sc-9732

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. GRP1 interacts with PtdIns(3,4,5)P3 localized to the plasma membrane *in vitro* and may be a PtdIns(3,4,5)P3 receptor. Additionally, GRP1 may regulate protein sorting and membrane trafficking through interaction with the guanosine triphosphate ARF. GRP1 may control cell adhesion through interaction with integrins.

REFERENCES

1. Szuromi, P. 1997. Getting a GRP. Science 275: 1853.
2. 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.

CHROMOSOMAL LOCATION

Genetic locus: CYTH3 (human) mapping to 7p22.1; Cyth3 (mouse) mapping to 5 G2.

SOURCE

GRP1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GRP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9732 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GRP1 (C-20) is recommended for detection of GRP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GRP1 (C-20) is also recommended for detection of GRP1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for GRP1 siRNA (h): sc-40472, GRP1 siRNA (m): sc-40473, GRP1 shRNA Plasmid (h): sc-40472-SH, GRP1 shRNA Plasmid (m): sc-40473-SH, GRP1 shRNA (h) Lentiviral Particles: sc-40472-V and GRP1 shRNA (m) Lentiviral Particles: sc-40473-V.

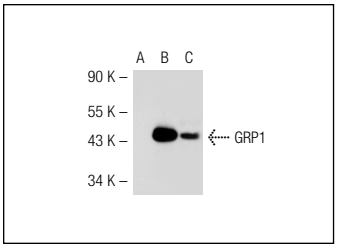
Molecular Weight of GRP1: 46 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, GRP1 (m): 293T Lysate: sc-120646 or F9 cell lysate: sc-2245.

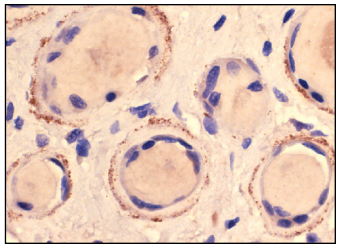
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



GRP1 (C-20): sc-9732. Western blot analysis of GRP1 expression in non-transfected 293T: sc-117752 (**A**), mouse GRP1 transfected 293T: sc-120646 (**B**) and PC-12 (**C**) whole cell lysates.



GRP1 (C-20): sc-9732. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tumor showing membrane localization.

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.

PROTOCOLS

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