

GRAP1 (E-24): sc-135681

BACKGROUND

GRAP1, also designated GRASP-1 or GRIP-associated protein, contains a RASGEF (Ras GDP/GTP exchange factor) domain, a caspase-3 cleavage site, a region homologous to RBD (Ras binding domain) and a PDZ domain. The caspase-3 cleavage site separates these domains into an amino-terminal GEF catalytic domain and a carboxyl-terminal regulatory domain, which is a proteolytic fragment. This overall structure is similar to Ral GDS. GRAP1 is a member of RASGEF (Ras protein GDP/GTP exchange factors) family. GRAP1 is expressed in the cytosol and partially localized to the membrane in all tissues of the nervous system, while the fragment is located only in the cytosol. GRAP1 associates with the seventh GRIP1 (glutamate receptor interacting protein) PDZ domain. GRIP1 binds to the C-termini of AMPA receptors and may be an adapter protein that links AMPA receptors to other proteins. GRAP1 may be involved in the regulation of Ras signaling and AMPA receptor distribution, through the activation of NMDA receptors. caspase-3 may disrupt the proper regulation or targeting of GEF by cleaving the regulatory domain from the catalytic domain.

REFERENCES

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3. Dong, H., O'Brien, R.J., Fung, E.T., Lanahan, A.A., Worley, P.F. and Huganir, R.L. 1997. GRIP: a synaptic PDZ domain-containing protein that interacts with AMPA receptors. *Nature* 386: 279-284.
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CHROMOSOMAL LOCATION

Genetic locus: GRIPAP1 (human) mapping to Xp11.23; Gripap1 (mouse) mapping to X A1.1.

SOURCE

GRAP1 (E-24) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of GRAP1 of rat origin.

PRODUCT

Each vial contains IgG in 100 μ l of 10 mM HEPES with 150 mM NaCl, 50% glycerol and < 0.1% BSA.

APPLICATIONS

GRAP1 (E-24) is recommended for detection of GRAP1 of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000) and immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for GRAP1 siRNA (h): sc-105416, GRAP1 siRNA (m): sc-145757, GRAP1 shRNA Plasmid (h): sc-105416-SH, GRAP1 shRNA Plasmid (m): sc-145757-SH, GRAP1 shRNA (h) Lentiviral Particles: sc-105416-V and GRAP1 shRNA (m) Lentiviral Particles: sc-145757-V.

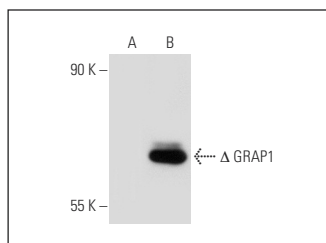
Molecular Weight of GRAP1: 96 kDa.

Positive Controls: GRAP1 (h2): 293T Lysate: sc-172182.

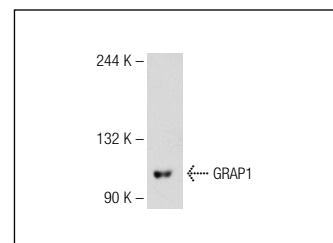
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



GRAP1 (E-24): sc-135681. Western blot analysis of GRAP1 expression in non-transfected: sc-117752 (A) and truncated human GRAP1 transfected: sc-172182 (B) 293T whole cell lysates.



GRAP1 (E-24): sc-135681. Western blot analysis of GRAP1 expression in mouse brain tissue extract.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

MONOS
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Try **GRAP1 (A-6): sc-398198** or **GRAP1 (E-7): sc-398199**, our highly recommended monoclonal alternatives to GRAP1 (E-24).