

# Ras GAP (171): sc-425

## BACKGROUND

The mammalian c-H-, c-K- and N-Ras proto-oncogenes encode ubiquitously expressed 21 kDa proteins. p21<sup>Ras</sup> can exist in either a physiologically quiescent GDP-binding state or a GTP-binding signal-emitting state. Oncogenic p21<sup>Ras</sup> proteins are trapped in the excited signal-emitting state because the mechanism normally employed to delimit their excitation period, hydrolysis of their bound GTP to GDP, is impaired as a result of specific mutations. Interaction of p21<sup>Ras</sup> with GTPase activating protein (GAP) can increase hydrolysis of p21<sup>Ras</sup>-bound GTP by as much as 1000-fold. The product of the neurofibromatosis type 1 gene (NF1) has also been shown to exhibit p21<sup>Ras</sup> GAP activity and proteins that stimulate the GTPase activity of three other low molecular weight GTPases, including Rho, Rab 3A and Rap 1, have also been described.

## CHROMOSOMAL LOCATION

Genetic locus: RASA1 (human) mapping to 5q14.3; Rasa1 (mouse) mapping to 13 C3.

## SOURCE

Ras GAP (171) is a rabbit polyclonal antibody raised against amino acids 171-448 of Ras GAP 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.

Available as agarose conjugate for immunoprecipitation, sc-425 AC, 500 µg/0.25 ml agarose in 1 ml.

## APPLICATIONS

Ras GAP (171) is recommended for detection of Ras GAP p120 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Ras GAP (171) is also recommended for detection of Ras GAP p120 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Ras GAP siRNA (h): sc-29467, Ras GAP siRNA (m): sc-36394, Ras GAP shRNA Plasmid (h): sc-29467-SH, Ras GAP shRNA Plasmid (m): sc-36394-SH, Ras GAP shRNA (h) Lentiviral Particles: sc-29467-V and Ras GAP shRNA (m) Lentiviral Particles: sc-36394-V.

Molecular Weight of Ras GAP: 120 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, KNRK whole cell lysate: sc-2214 or 3611-RF whole cell lysate: sc-2215.

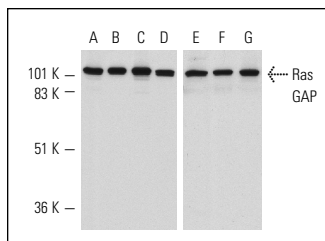
## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

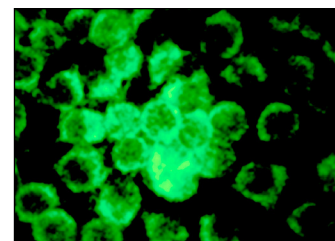
## RESEARCH USE

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

## DATA



Western blot analysis of Ras GAP expression in NIH/3T3 (A, E), KNRK (B, F), 3611-RF (C, G) and A-431 (D) whole cell lysates. Antibodies tested include Ras GAP (B4F8): sc-63 (A-D) and Ras GAP (171): sc-425 (E-G).



Ras GAP (171): sc-425. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Sidorenko, S.P., et al. 1995. Human spleen tyrosine kinase p72<sup>Syk</sup> associates with the Src-family kinase p53/56Lyn and a 120-kDa phosphoprotein. *Proc. Natl. Acad. Sci. USA* 92: 359-363.
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- Kunath, T., et al. 2003. Transgenic RNA interference in ES cell-derived embryos recapitulates a genetic null phenotype. *Nat. Biotechnol.* 21: 559-561.
- Smith, M.J., et al. 2013. NMR-based functional profiling of RASopathies and oncogenic RAS mutations. *Proc. Natl. Acad. Sci. USA* 110: 4574-4579.



Try **Ras GAP (B4F8): sc-63** or **Ras GAP (D4B4): sc-64**, our highly recommended monoclonal alternatives to Ras GAP (171). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Ras GAP (B4F8): sc-63**.