

# RASGEF1A (V-14): sc-107083

## BACKGROUND

RASGEF1A (RasGEF domain family, member 1A) is a 481 amino acid guanine-nucleotide exchange factor (GEF) for H-Ras, K-Ras, and N-Ras. RASGEF1A may also play a role in cell migration. RASGEF1A is highly expressed in spinal chord and brain and contains one N-terminal Ras-GEF domain and one Ras-GEF domain. The gene that encodes RASGEF1A maps to human chromosome 10, which contains over 800 genes and 135 million nucleotides, making up nearly 4.5% of the human genome. PTEN is an important tumor suppressor gene located on chromosome 10 and, when defective, causes a genetic predisposition to cancer development known as Cowden syndrome. The chromosome 10 encoded gene ERCC6 is important for DNA repair and is linked to Cockayne syndrome which is characterized by extreme photosensitivity and premature aging. Tetrahydrobiopterin deficiency and a number of syndromes involving defective skull and facial bone fusion are also linked to chromosome 10. As with most trisomies, trisomy 10 is rare and is deleterious.

## REFERENCES

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- Yaman, E., Gasper, R., Koerner, C., Wittinghofer A. and Tazebay, U.H. 2009. RASGEF1A and RASGEF1B are guanine nucleotide exchange factors that discriminate between Rap GTP-binding proteins and mediate Rap 2-specific nucleotide exchange. *FEBS J.* 276: 4607-4616.

## CHROMOSOMAL LOCATION

Genetic locus: RASGEF1A (human) mapping to 10q11.21.

## SOURCE

RASGEF1A (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RASGEF1A 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-107083 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

RASGEF1A (V-14) is recommended for detection of RASGEF1A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

RASGEF1A (V-14) is also recommended for detection of RASGEF1A in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RASGEF1A siRNA (h): sc-90732, RASGEF1A shRNA Plasmid (h): sc-90732-SH and RASGEF1A shRNA (h) Lentiviral Particles: sc-90732-V.

Molecular Weight of RASGEF1A: 55 kDa.

## 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) 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.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.