

RASSF7 (Q-12): sc-132782

BACKGROUND

Activated Ras proteins may induce senescence, apoptosis and terminal differentiation, though they are often associated with stimulating growth and transformation. Members of the RASSF family contain a highly conserved Ras association domain (RalGDS/AF-6 or RA) and function as Ras effectors/tumor suppressors. RASSF7 (Ras association domain-containing protein 7), also designated HRAS1-related cluster protein 1, is a 373 amino acid protein that localizes to the centrosome. RASSF7, RASSF8, RASSF9 and RASSF10 are four evolutionary conserved proteins that are collectively known as the N-terminal RASSF family. Expressed in skin, neural tube and eye, RASSF7 is believed to play an essential role in mitosis. Further supporting its mitotic role, knockdown of *Xenopus* RASSF7 has been shown to influence cell failure to form mitotic spindle and also cause nuclear breakdown and apoptosis. As a result of alternative splicing events, there are three characterized isoforms of RASSF7 that primarily differ in the C-terminus.

REFERENCES

- Weitzel, J.N., Kasperczyk, A., Mohan, C. and Krontiris, T.G. 1992. The HRAS1 gene cluster: two upstream regions recognizing transcripts and a third encoding a gene with a leucine zipper domain. *Genomics* 14: 309-319.
- Weitzel, J.N. and Patel, J. 1994. A single P₁ clone bearing three genes from human chromosome 11p15.5: HRC1, HRAS1, and RNH. *Genet. Anal. Tech. Appl.* 11: 165-170.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 143023. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Song, M.S., Chang, J.S., Song, S.J., Yang, T.H., Lee, H. and Lim, D.S. 2005. The centrosomal protein RAS association domain family protein 1A (RASSF1A)-binding protein 1 regulates mitotic progression by recruiting RASSF1A to spindle poles. *J. Biol. Chem.* 280: 3920-3927.
- van der Weyden, L. and Adams, D.J. 2007. The Ras-association domain family (RASSF) members and their role in human tumorigenesis. *Biochim. Biophys. Acta* 1776: 58-85.
- Sherwood, V., Manbodh, R., Sheppard, C. and Chalmers, A.D. 2008. RASSF7 is a member of a new family of RAS association domain-containing proteins and is required for completing mitosis. *Mol. Biol. Cell* 19: 1772-1782.

CHROMOSOMAL LOCATION

Genetic locus: RASSF7 (human) mapping to 11p15.5; Rassf7 (mouse) mapping to 7 F5.

SOURCE

RASSF7 (Q-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RASSF7 of human origin.

STORAGE

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

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-132782 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RASSF7 (Q-12) is recommended for detection of RASSF7 isoforms 1 and 2 of mouse, rat and 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); non cross-reactive with other RASSF family members.

Suitable for use as control antibody for RASSF7 siRNA (h): sc-96878, RASSF7 siRNA (m): sc-152716, RASSF7 shRNA Plasmid (h): sc-96878-SH, RASSF7 shRNA Plasmid (m): sc-152716-SH, RASSF7 shRNA (h) Lentiviral Particles: sc-96878-V and RASSF7 shRNA (m) Lentiviral Particles: sc-152716-V.

Molecular Weight of RASSF7: 40 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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.

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.