

RSAD2 (E-13): sc-132442

BACKGROUND

RSAD2 (radical S-adenosyl methionine domain-containing protein 2), also known as CIG5 (cytomegalovirus-induced gene 5 protein), vlg1, viperin or CIG33, is a 361 amino acid protein that is involved in antiviral defense against pathogens such as Hep C, cytomegalovirus and HIV-1. Localized to the cytosolic side of the endoplasmic reticulum and relocated to the Golgi apparatus upon viral infection, RSAD2 is thought to prevent viral budding by disrupting lipid rafts at the plasma membrane and supporting the interferon-induced antiviral state of the cell. Additionally, RSAD2 can bind to and inactivate FDPS (an enzyme that is crucial for the synthesis of cholesterol and geranylated and farnesylated proteins), thereby playing a role in lipid synthesis. Overexpression of RSAD2 leads to abnormal lipid accumulation that is associated with atherosclerosis, a chronic inflammatory disease characterized by hardened arteries.

REFERENCES

- Chin, K.C., et al. 2001. Viperin (cig5), an IFN-inducible antiviral protein directly induced by human cytomegalovirus. *Proc. Natl. Acad. Sci. USA* 98: 15125-15130.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607810. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Olofsson, P.S., et al. 2005. The antiviral cytomegalovirus inducible gene 5/viperin is expressed in atherosclerosis and regulated by proinflammatory agents. *Arterioscler. Thromb. Vasc. Biol.* 25: e113-e116.
- Helbig, K.J., et al. 2005. Analysis of ISG expression in chronic hepatitis C identifies viperin as a potential antiviral effector. *Hepatology* 42: 702-710.
- Severa, M., et al. 2006. Toll-like receptor-dependent and -independent viperin gene expression and counter-regulation by PRDI-binding factor-1/BLIMP1. *J. Biol. Chem.* 281: 26188-26195.

CHROMOSOMAL LOCATION

Genetic locus: RSAD2 (human) mapping to 2p25.2; Rsd2 (mouse) mapping to 12 A2.

SOURCE

RSAD2 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RSAD2 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-132442 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

RSAD2 (E-13) is recommended for detection of RSAD2 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); non cross-reactive with RSAD1.

Suitable for use as control antibody for RSAD2 siRNA (h): sc-94261, RSAD2 siRNA (m): sc-153136, RSAD2 shRNA Plasmid (h): sc-94261-SH, RSAD2 shRNA Plasmid (m): sc-153136-SH, RSAD2 shRNA (h) Lentiviral Particles: sc-94261-V and RSAD2 shRNA (m) Lentiviral Particles: sc-153136-V.

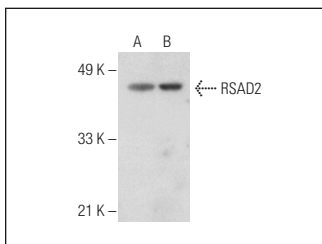
Molecular Weight of RSAD2: 43 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or HUV-EC-C whole cell lysate.

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.

DATA



RSAD2 (E-13): sc-132442. Western blot analysis of RSAD2 expression in HUV-EC-C (A) and Jurkat (B) whole cell lysates.

RESEARCH USE

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

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Try **RSAD2 (G-8): sc-390342**, our highly recommended monoclonal alternative to RSAD2 (E-13).