

RSAD2 (O-24): sc-102099

BACKGROUND

RSAD2 (radical S-adenosyl methionine domain-containing protein 2), also known as CIG5 (cytomegalovirus-induced gene 5 protein), vig1, 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. and Cresswell, P. 2001. Viperin (CIG5), an IFN-inducible antiviral protein directly induced by human cytomegalovirus. *Proc. Natl. Acad. Sci. USA* 98: 15125-15130.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: RSAD2 (human) mapping to 2p25.2; Rsad2 (mouse) mapping to 12 A2.

SOURCE

RSAD2 (O-24) is a purified rabbit polyclonal antibody raised against RSAD2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 mL PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

RSAD2 (O-24) is recommended for detection of RSAD2 of mouse, human, canine and zebrafish 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

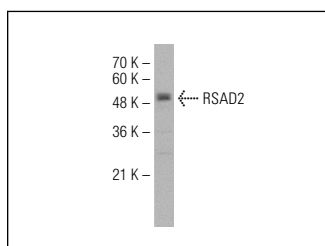
Molecular Weight of RSAD2: 43 kDa.

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

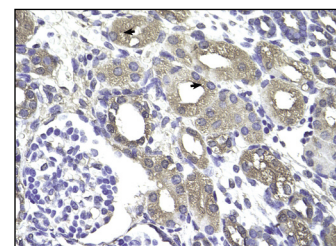
RECOMMENDED SECONDARY REAGENTS

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



RSAD2 (O-24): sc-102099. Western blot analysis of RSAD2 expression in Jurkat whole cell lysate.



RSAD2 (O-24): sc-102099. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

- Panchanathan, R., et al. 2010. Aim2 deficiency stimulates the expression of IFN-inducible Ifi202, a lupus susceptibility murine gene within the Nba2 autoimmune susceptibility locus. *J. Immunol.* 185: 7385-7393.
- Vélez, P., et al. 2014. Identification of a circulating microvesicle protein network involved in ST-elevation myocardial infarction. *Thromb. Haemost.* 112: 716-726.

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.



Try **RSAD2 (G-8): sc-390342**, our highly recommended monoclonal alternative to RSAD2 (O-24).