

OAS2 (G-9): sc-271117

BACKGROUND

The 2'-5'-oligoadenylate synthetase (OAS) family is comprised of four members: OAS1, OAS2, OAS3 and OASL. These proteins are induced by interferons and function to convert ATP into 2'-5'-linked oligomers of adenosine in the presence of double-stranded RNA and magnesium ions. Copper, iron and zinc ions strongly inhibit the OAS enzymatic activity, while manganese ions can replace magnesium ions as an activator. The OAS family plays a significant role in the inhibition of cellular protein synthesis as well as in viral infection resistance. OAS2, which represents the "medium form" in the OAS family, contains two OAS1-homologous domains separated by a proline-rich putative linker region. It is functionally active as a dimer. Abnormal expression patterns of OAS2 may be linked to infection flare in lupus patients.

REFERENCES

- Corrias, M.V., et al. 1995. Induction of 2.5 OAS gene expression and activity is not sufficient for IFN- γ -induced neuroblastoma cell differentiation. *Int. J. Cancer* 62: 223-229.
- Hartmann, R., et al. 2001. Inhibition of 2'-5'-oligoadenylate synthetase by divalent metal ions. *FEBS Lett.* 507: 54-58.

CHROMOSOMAL LOCATION

Genetic locus: OAS2 (human) mapping to 12q24.13; Oas2 (mouse) mapping to 5 F.

SOURCE

OAS2 (G-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 706-735 near the C-terminus of OAS2 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-271117 X, 200 μ g/0.1 ml.

OAS2 (G-9) is available conjugated to agarose (sc-271117 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271117 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271117 PE), fluorescein (sc-271117 FITC), Alexa Fluor® 488 (sc-271117 AF488), Alexa Fluor® 546 (sc-271117 AF546), Alexa Fluor® 594 (sc-271117 AF594) or Alexa Fluor® 647 (sc-271117 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271117 AF680) or Alexa Fluor® 790 (sc-271117 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271117 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

OAS2 (G-9) is recommended for detection of OAS2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

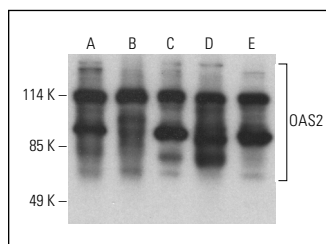
Suitable for use as control antibody for OAS2 siRNA (h): sc-61243, OAS2 siRNA (m): sc-61244, OAS2 shRNA Plasmid (h): sc-61243-SH, OAS2 shRNA Plasmid (m): sc-61244-SH, OAS2 shRNA (h) Lentiviral Particles: sc-61243-V and OAS2 shRNA (m) Lentiviral Particles: sc-61244-V.

OAS2 (G-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

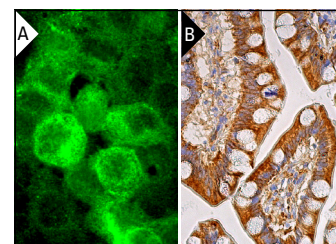
Molecular Weight of OAS2: 69 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, HL-60 whole cell lysate: sc-2209 or GA-10 whole cell lysate: sc-364230.

DATA



OAS2 (G-9) HRP: sc-271117 HRP. Direct western blot analysis of OAS2 expression in RAW 264.7 (A), SP2/O (B), GA-10 (C), HL-60 (D) and BJAB (E) whole cell lysates.



OAS2 (G-9): sc-271117. Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Pollok, S., et al. 2013. Interferon α -armed nanoparticles trigger rapid and sustained Stat1-dependent anti-viral cellular responses. *Cell. Signal.* 25: 989-998.
- Scott, M.L., et al. 2020. Human papillomavirus type 16 E5 inhibits interferon signaling and supports episomal viral maintenance. *J. Virol.* 94: e01582-19.
- Göder, A., et al. 2021. STAT1 N-terminal domain discriminatively controls type I and type II IFN signaling. *Cytokine* 144: 155552.
- Deng, S., et al. 2023. Downregulation of RCN1 promotes pyroptosis in acute myeloid leukemia cells. *Mol. Oncol.* 17: 2584-2602.

RESEARCH USE

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