SANTA CRUZ BIOTECHNOLOGY, INC.

OAS2 (R-130): sc-99099

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 represents the "medium form" in the OAS family, and it maps to human chromosome 12q24.2. OAS2 contains two OAS1-homologous domains separated by a proline-rich putative linker region, and it is functionally active as a dimer. Abnormal expression patterns of OAS2 may be linked to infection flare in lupus patients.

REFERENCES

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2. Hartmann, R., et al. 2001. Inhibition of 2'-5' oligoadenylate synthetase by divalent metal ions. FEBS Lett. 507: 54-58.
3. Kakuta, S., et al. 2002. Genomic structure of the mouse 2',5'-oligoadenylate synthetase gene family. J. Interferon Cytokine Res. 22: 981-993.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603350. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Eskildsen, S., et al. 2003. Characterization of the 2'-5'-oligoadenylate synthetase ubiquitin-like family. Nucleic Acids Res. 31: 3166-3173.
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7. Torshin, I.Y. 2005. Three-dimensional models of human 2'-5' oligoadenylate synthetases: a new computational method for reconstructing an enzyme assembly. Med. Sci. Monit. 11: BR235-BR247.
8. Tessier, M.C., et al. 2006. Type 1 diabetes and the OAS gene cluster: association with splicing polymorphism or haplotype? J. Med. Genet. 43: 129-132.

CHROMOSOMAL LOCATION

Genetic locus: Oas2 (rat) mapping to 12.

SOURCE

OAS2 (R-130) is a rabbit polyclonal antibody raised against amino acids 101-230 mapping near the N-terminus of OAS2 of rat 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-99099 X, 200 µg/0.1 ml.

APPLICATIONS

OAS2 (R-130) is recommended for detection of OAS2 of rat 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).

OAS2 (R-130) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

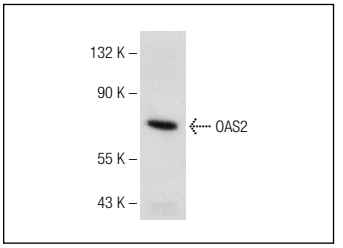
Molecular Weight of OAS2: 69 kDa.

Positive Controls: PC-12 whole cell lysate: sc-2250.

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.

DATA



OAS2 (R-130): sc-99099. Western blot analysis of OAS2 expression in PC-12 whole cell lysate.

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.