SANTA CRUZ BIOTECHNOLOGY, INC.

SRA (D-8): sc-271948

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Steroid receptor RNA activator (SRA) selectively mediates transactivation of steroid hormone receptors. Specifically, SRA exists as both an RNA transcript that forms a complex with steroid receptor coactivator-1 and as a stably expressed protein. There are six RNA motifs in SRA that are important for coactivation. SRA is ubiquitously expressed in normal tissues with higher levels of expression in liver and skeletal muscle. SRA is expressed at a low level in brain. SRA is expressed at higher levels in breast tumor than in normal tissue. Overexpression of SRA stimulates ERα transcriptional activity. In cells transfected with antisense oligodeoxynucleotides to SRA, ERα expression is reduced in a dose-dependent fashion. SMRT/HDAC1 associated repressor protein (SHARP) binds to SRA and inhibits SRA-potentiated steroid receptor transciption.

REFERENCES

1. Lanz, R.B., et al. 1999. A steroid receptor coactivator, SRA, functions as an RNA and is present in an SRC-1 complex. Cell 97: 17-27.
2. Murphy, L.C., et al. 2000. Altered expression of estrogen receptor co-regulators during human breast tumorigenesis. Cancer Res. 60: 6266-6271.
3. Shi, Y., et al. 2001. SHARP, an inducible cofactor that integrates nuclear receptor repression and activation. Genes Dev. 15: 1140-1151.
4. Watanabe, M., et al. 2001. A subfamily of RNA-binding DEAD-box proteins acts as an estrogen receptor α coactivator through the N-terminal activation domain (AF-1) with an RNA coactivator, SRA. EMBO J. 20: 1341-1352.
5. Lanz, R.B., et al. 2002. Distinct RNA motifs are important for coactivation of steroid hormone receptors by steroid receptor RNA activator (SRA). Proc. Natl. Acad. Sci. USA 99: 16081-16086.
6. Cavarretta, I.T., et al. 2002. Reduction of coactivator expression by antisense oligodeoxynucleotides inhibits ERα transcriptional activity and MCF7 proliferation. Mol. Endocrinol. 16: 253-270.

CHROMOSOMAL LOCATION

Genetic locus: SRA1 (human) mapping to 5q31.3; Sra1 (mouse) mapping to 18 B2.

SOURCE

SRA (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 8-41 near the N-terminus of SRA of mouse origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271948 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

SRA (D-8) is recommended for detection of SRA of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for SRA siRNA (h): sc-38461, SRA siRNA (m): sc-38462, SRA shRNA Plasmid (h): sc-38461-SH, SRA shRNA Plasmid (m): sc-38462-SH, SRA shRNA (h) Lentiviral Particles: sc-38461-V and SRA shRNA (m) Lentiviral Particles: sc-38462-V.

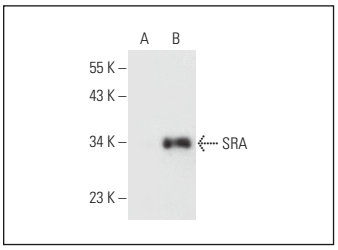
Molecular Weight of SRA: 35 kDa.

Positive Controls: rat skeletal muscle extract: sc-364810, NIH/3T3 whole cell lysate: sc-2210 or SRA (m2): 293T Lysate: sc-123773.

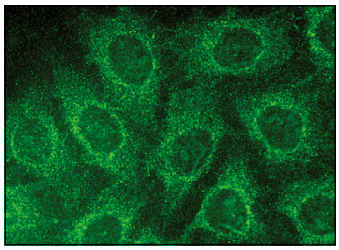
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SRA (D-8): sc-271948. Western blot analysis of SRA expression in non-transfected: sc-117752 (**A**) and mouse SRA transfected: sc-123773 (**B**) 293T whole cell lysates.



SRA (D-8): sc-271948. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Mattos, K.A., et al. 2014. *Mycobacterium leprae* intracellular survival relies on cholesterol accumulation in infected macrophages: a potential target for new drugs for leprosy treatment. Cell. Microbiol. 16: 797-815.

STORAGE

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