SANTA CRUZ BIOTECHNOLOGY, INC.

RORa (C-7): sc-518081



BACKGROUND

Retinoids are metabolites of vitamin A (retinol) and represent an important class of signaling molecule during vertebrate development and tissue differentiation. A large group of nuclear transcription factors, including vitamin D_3 receptor (VDR), thyroid hormone receptor (TR), RAR, RXR and ecdysone receptor, have a high affinity for retinoic acids and are members of the steroid receptor superfamily. This family acts by directly associating with DNA sequences known as hormone response elements (HREs) and bind DNA as either homo- or heterodimers. ROR α is a member of the steroid receptor superfamily and is classified as an "orphan receptor" due to the lack of a defined ligand. Two isoforms of ROR α have been described and are designated ROR α 1 and ROR α 2. ROR α , also referred to as RZR, binds DNA as a monomer at consensus ROR α response elements (ROREs).

CHROMOSOMAL LOCATION

Genetic locus: RORA (human) mapping to 15q22.2.

SOURCE

 $ROR\alpha$ (C-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 500-523 at the C-terminus of $ROR\alpha 1$ of human origin.

PRODUCT

Each vial contains 200 μ g lgG₃ 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-518081 X, 200 μ g/0.1 ml.

ROR α (C-7) is available conjugated to agarose (sc-518081 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518081 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518081 PE), fluorescein (sc-518081 FITC), Alexa Fluor[®] 488 (sc-518081 AF488), Alexa Fluor[®] 546 (sc-518081 AF546), Alexa Fluor[®] 594 (sc-518081 AF594) or Alexa Fluor[®] 647 (sc-518081 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518081 AF680) or Alexa Fluor[®] 790 (sc-518081 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ROR α (C-7) is recommended for detection of the multiple isoforms of ROR α receptors of 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 ROR α siRNA (h): sc-38862, ROR α shRNA Plasmid (h): sc-38862-SH and ROR α shRNA (h) Lentiviral Particles: sc-38862-V.

 $ROR\alpha$ (C-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ROR α : 67 kDa.

Positive Controls: human ROR α transfected HEK293T whole cell lysate.

STORAGE

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

DATA





ROR α (C-7): sc-518081. Western blot analysis of ROR α expression in non-transfected (**A**) and human ROR α transfected (**B**) HEK293T whole cell lysates.

human recombinant ROR α fusion protein. Detection reagent used: m-IgG_3 BP-HRP: sc-533670.

SELECT PRODUCT CITATIONS

- 1. Liang, T., et al. 2021. Inhibition of nuclear receptor ROR α attenuates cartilage damage in osteoarthritis by modulating IL-6/STAT3 pathway. Cell Death Dis. 12: 886.
- Yu, H., et al. 2022. Maternal diabetes-mediated RORA suppression in mice contributes to autism-like offspring through inhibition of aromatase. Commun. Biol. 5: 51.
- Xiao, L., et al. 2022. Maternal diabetes-mediated RORA suppression contributes to gastrointestinal symptoms in autism-like mouse offspring. BMC Neurosci. 23: 8.
- 4. Li, D., et al. 2022. RORA alleviates LPS-induced apoptosis of renal epithelial cells by promoting PGC-1 α transcription. Clin. Exp. Nephrol. 26: 512-521.
- 5. Xiao, W., et al. 2022. POU6F1 cooperates with RORA to suppress the proliferation of lung adenocarcinoma by downregulation HIF1A signaling pathway. Cell Death Dis. 13: 427.
- 6. Yu, X., et al. 2023. Liraglutide ameliorates hepatic steatosis via retinoic acid receptor-related orphan receptor α -mediated autophagy pathway. IUBMB Life 75: 856-867.
- Sánchez-Martin, S., et al. 2024. Tumoral periprostatic adipose tissue exovesicles-derived miR-20a-5p regulates prostate cancer cell proliferation and inflammation through the RORA gene. J. Transl. Med. 22: 661.
- Kalim, U.U., et al. 2024. A proximal enhancer regulates RORA expression during early human Th17 cell differentiation. Clin. Immunol. 264: 110261.
- Liu, H., et al. 2024. UBR5 metabolically reprograms nasopharyngeal carcinoma cells to promote glycolysis and M2 polarization via SPLUNC1 signaling. NPJ Precis. Oncol. 8: 252.

RESEARCH USE

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