

ROR α (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 D₃ 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).

REFERENCES

1. Koelle, M.R., et al. 1991. The *Drosophila* EcR gene encodes an ecdysone receptor, a new member of the steroid receptor superfamily. *Cell* 67: 59-77.
2. Mangelsdorf, D.J., et al., eds. 1994. The Retinoids: Biology, Chemistry, and Medicine. New York: Raven Press, Ltd., 314-349.
3. Bhat, M.K., et al. 1994. Phosphorylation enhances the target gene sequence-dependent dimerization of thyroid hormone receptor with retinoid X receptor. *Proc. Natl. Acad. Sci. USA* 91: 7927-7931.
4. Mangelsdorf, D.J., et al. 1995. The nuclear receptor superfamily: the second decade. *Cell* 83: 835-839.
5. Leblanc, B.P. and Stunnenberg, H.G. 1995. 9-*cis* retinoic acid signaling: changing partners causes some excitement. *Genes Dev.* 9: 1811-1816.
6. Mangelsdorf, D.J. and Evans, R.M. 1995. The RXR heterodimers and orphan receptors. *Cell* 83: 841-850.

CHROMOSOMAL LOCATION

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

SOURCE

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

PRODUCT

Each vial contains 200 μ g IgG₃ 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 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518081 HRP), 200 μ g/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 μ g/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 μ g/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 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

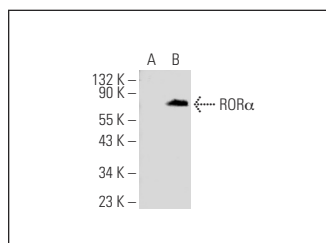
Suitable for use as control antibody for ROR α siRNA (h): sc-38862, ROR α shRNA Plasmid (h): sc-38862-SH and ROR α shRNA (h) Lentiviral Particles: sc-38862-V.

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

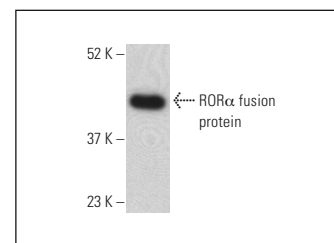
Molecular Weight of ROR α : 67 kDa.

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

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.



ROR α (C-7): sc-518081. Western blot analysis of human recombinant ROR α fusion protein. Detection reagent used: m-IgG₃ 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.
2. Ma, X., et al. 2021. CircGSK3B promotes RORA expression and suppresses gastric cancer progression through the prevention of EZH2 *trans*-inhibition. *J. Exp. Clin. Cancer Res.* 40: 330.
3. 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.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.