

ROR γ (K-20): sc-14196

BACKGROUND

The nuclear orphan receptors ROR α and ROR γ are members of the nuclear hormone receptor superfamily. This family acts by directly associating with DNA sequences known as hormone response elements (HREs) and typically bind DNA as either homo- or heterodimers. ROR α and ROR γ are unique in that they bind DNA as monomers. ROR α has multiple isoforms that share common DNA and putative ligand-binding domains, but differ in their amino terminal domains, which are generated by alternative RNA processing. ROR γ comprises a 560 amino acid protein that shares 50% amino acid identity with ROR α and is most highly expressed in skeletal muscle. Although these proteins are considered "orphan receptors", due to a lack of defined ligands, experimental evidence has shown that melatonin may be the natural ligand for these nuclear receptors. The gene encoding ROR α maps to chromosome 15q22.2 and the gene encoding ROR γ maps to chromosome 1q21.3.

REFERENCES

1. Giguere, V., et al. 1994. Isoform-specific amino-terminal domains dictate DNA-binding properties of ROR α , a novel family of orphan hormone nuclear receptors. *Genes Dev.* 8: 538-543.
2. Hirose, T., et al. 1994. ROR γ : the third member of ROR/RZR orphan receptor subfamily that is highly expressed in skeletal muscle. *Biochem. Biophys. Res. Commun.* 205: 1976-1983.
3. Carlberg, C. and Wiesenberger, I. 1995. The orphan receptor family RZR/ROR, melatonin and 5-lipoxygenase: an unexpected relationship. *J. Pineal Res.* 18: 171-178.
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.

CHROMOSOMAL LOCATION

Genetic locus: RORC (human) mapping to 1q21.3; Rorc (mouse) mapping to 3 F2.1.

SOURCE

ROR γ (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ROR γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14196 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-14196 X, 200 μ g/0.1 ml.

STORAGE

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

APPLICATIONS

ROR γ (K-20) is recommended for detection of ROR γ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ROR γ (K-20) is also recommended for detection of ROR γ in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ROR γ siRNA (h): sc-38880, ROR γ siRNA (m): sc-38881, ROR γ shRNA Plasmid (h): sc-38880-SH, ROR γ shRNA Plasmid (m): sc-38881-SH, ROR γ shRNA (h) Lentiviral Particles: sc-38880-V and ROR γ shRNA (m) Lentiviral Particles: sc-38881-V.

ROR γ (K-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ROR γ : 63 kDa.

Positive Controls: U-937 nuclear extract: sc-2156 or A-673 nuclear extract: sc-2128.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Mitsuma, T., et al. 2008. Enhancement of gene expression by a peptide p(CHWPR) produced by *Bifidobacterium lactis* BB-12. *Microbiol. Immunol.* 52: 144-155.
2. Mühlbauer, E., et al. 2013. Differential and day-time dependent expression of nuclear receptors ROR α , ROR β , ROR γ and RXR α in the rodent pancreas and islet. *Mol. Cell. Endocrinol.* 365: 129-138.

RESEARCH USE

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

MONOS
Satisfaction
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Try **ROR γ (D-4): sc-365476** or **ROR γ (162C2a): sc-81371**, our highly recommended monoclonal alternatives to ROR γ (K-20).