SANTA CRUZ BIOTECHNOLOGY, INC.

# RORγ (h5): 293T Lysate: sc-170801

## BACKGROUND

The nuclear orphan receptors RORα and RORγ 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. RORα and RORγ are unique in that they bind DNA as monomers. RORα 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. RORγ comprises a 560 amino acid protein that shares 50% amino acid identity with RORα 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 RORα maps to chromosome 15q22.2 and the gene encoding RORγ maps to chromosome 1q21.3

## REFERENCES


1. Giguere, V., et al. 1994. Isoform-specific amino-terminal domains dictate DNA-binding properties of RORα, a novel family of orphan hormone nuclear receptors. Genes Dev. 8: 538-543.
2. Hirose, T., et al. 1994. RORγ: 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., et al. 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., et al. 1995. 9-*cis* retinoic acid signaling: changing partners causes some excitement. Genes Dev. 9: 1811-1816.
6. Mangelsdorf, D.J., et al. 1995. The RXR heterodimers and orphan receptors. Cell 83: 841-850.
7. Gawlas, K., et al. 2000. Differential binding and transcriptional behaviour of two highly related orphan receptors, RORα$_4$ and RORβ$_1$. Biochim. Biophys. Acta 1494: 236-241.


## CHROMOSOMAL LOCATION

Genetic locus: RORC (human) mapping to 1q21.3.

## PRODUCT

RORγ (h5): 293T Lysate represents a lysate of human RORγ transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

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

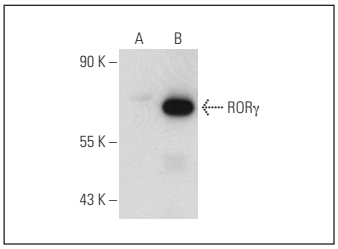
## APPLICATIONS

RORγ (h5): 293T Lysate is suitable as a Western Blotting positive control for human reactive RORγ antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RORγ (162C2a): sc-81371 is recommended as a positive control antibody for Western Blot analysis of enhanced human RORγ expression in RORγ transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## DATA




RORγ (162C2a): sc-81371. Western blot analysis of RORγ expression in non-transfected: sc-117752 (**A**) and human RORγ transfected: sc-170801 (**B**) 293T whole cell lysates.

## RESEARCH USE

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