

Rev-erb α (RS-14): sc-100910

BACKGROUND

Orphan nuclear receptors NR1D1 and NR1D2 are more commonly designated Rev-erb α and Rev-erb β , respectively. Rev-erb α acts as a receptor for triiodothyronine and is composed of three domains, a modulating N-terminal domain, a C-terminal steroid binding domain and a DNA-binding domain. Rev-erb β binds to the sequences 5'-AATGTAGGTCA-3' and 5'-ATAACTAGGTCA-3' and acts as a competitive repressor of ROR α function. It interacts with NCoA-5 co-activator which leads to an increase in transcription. Both Rev-erb α and Rev-erb β are nuclear proteins belonging to the nuclear hormone receptor family of proteins.

REFERENCES

- Laudet, V., et al. 1991. Genomic organization of the human thyroid hormone receptor α (c-erbA-1) gene. *Nucleic Acids Res.* 19: 1105-1112.
- Dumas, B., et al. 1995. A new orphan member of the nuclear hormone receptor superfamily closely related to Rev-erb. *Mol. Endocrinol.* 8: 996-1005.
- Zhao, Q., et al. 1998. Structural elements of an orphan nuclear receptor-DNA complex. *Mol. Cell* 1: 849-861.

CHROMOSOMAL LOCATION

Genetic locus: NR1D1 (human) mapping to 17q21.1; Nr1d1 (mouse) mapping to 11 D.

SOURCE

Rev-erb α (RS-14) is a mouse monoclonal antibody raised against recombinant Rev-erb α of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Rev-erb α (RS-14) is recommended for detection of Rev-erb α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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 Rev-erb α siRNA (h): sc-61458, Rev-erb α siRNA (m): sc-61459, Rev-erb α shRNA Plasmid (h): sc-61458-SH, Rev-erb α shRNA Plasmid (m): sc-61459-SH, Rev-erb α shRNA (h) Lentiviral Particles: sc-61458-V and Rev-erb α shRNA (m) Lentiviral Particles: sc-61459-V.

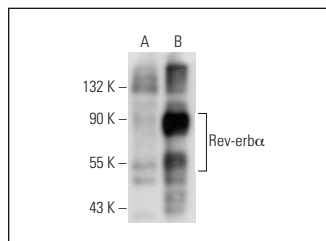
Molecular Weight of Rev-erb α : 68 kDa.

Positive Controls: Rev-erb α (m): 293T Lysate: sc-125901 or HeLa nuclear extract: sc-2120.

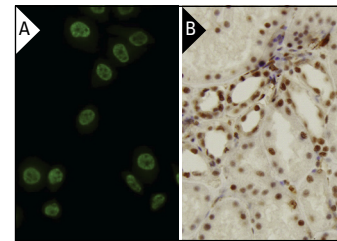
STORAGE

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

DATA



Rev-erb α (RS-14): sc-100910. Western blot analysis of Rev-erb α expression in non-transfected: sc-117752 (A) and mouse Rev-erb α transfected: sc-125901 (B) 293T whole cell lysates.



Rev-erb α (RS-14): sc-100910. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells (A) and immunoperoxidase staining of formalin-fixed, paraffin-embedded human kidney tissue (B) showing nuclear localization.

SELECT PRODUCT CITATIONS

- Zhu, B., et al. 2015. Coactivator-dependent oscillation of chromatin accessibility dictates circadian gene amplitude via Rev-erb loading. *Mol. Cell* 60: 769-783.
- Okabe, T., et al. 2016. Rev-erb α influences the stability and nuclear localization of the glucocorticoid receptor. *J. Cell Sci.* 129: 4143-4154.
- Carter, E.L., et al. 2016. High affinity heme binding to a heme regulatory motif on the nuclear receptor Rev-erb β leads to its degradation and indirectly regulates its interaction with nuclear receptor corepressor. *J. Biol. Chem.* 291: 2196-2222.
- Stujanna, E.N., et al. 2017. Rev-erb agonist improves adverse cardiac remodeling and survival in myocardial infarction through an anti-inflammatory mechanism. *PLoS ONE* 12: e0189330.
- Guo, D., et al. 2018. Tyrosine hydroxylase down-regulation after loss of Abelson helper integration site 1 (AHL1) promotes depression via the circadian clock pathway in mice. *J. Biol. Chem.* 293: 5090-5101.
- Das, V., et al. 2018. Pharmacological targeting of the mammalian clock reveals a novel analgesic for osteoarthritis-induced pain. *Gene* 655: 1-12.
- Ferder, I.C., et al. 2019. Meiotic gatekeeper Stra8 suppresses autophagy by repressing Nr1d1 expression during spermatogenesis in mice. *PLoS Genet.* 15: e1008084.
- Galmozzi, A., et al. 2019. PGRMC2 is an intracellular haem chaperone critical for adipocyte function. *Nature* 576: 138-142.
- Wagner, P.M., et al. 2019. Chemotherapeutic effect of SR9009, a Rev-erb agonist, on the human glioblastoma T98G cells. *ASN Neuro* 11: 1759091419892713.

RESEARCH USE

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