

Rev-erb α Antibody

✓ 100 μ l
(10 Western mini-blot)

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

rev. 05/21/08

This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as therapeutic or in diagnostic procedures.

Entrez-Gene ID # 9572
Swiss-Prot Acc. # P20393

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, R, Mk	80 kDa	Rabbit**

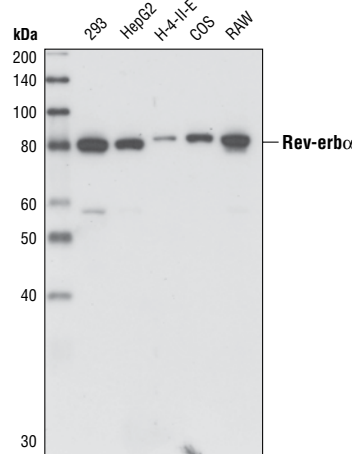
Background: Reverse orientation c-erbA gene α (Rev-erb α , EAR-1, or NR1D1) is a widely expressed member of the orphan nuclear receptor family of proteins (1). Rev-erb α is highly expressed in adipose tissue, skeletal muscle, brain and liver, and regulates cellular proliferation and differentiation. Expression increases during differentiation in adipocytes and ectopic expression of Rev-erb α potentiates the adipocyte differentiation of 3T3-L1 cells (2). In addition, expression oscillates with circadian rhythm in liver cells and Rev-erb α regulates expression of BMAL1, ApoA-I and ApoC-III, all key regulators of circadian rhythm (3,4,5,6,7). Phosphorylation of Rev-erb α Ser55 and Ser59 by GSK-3 β appears to stabilize Rev-erb α protein levels and is important for synchronizing and maintaining the circadian clock (8). Rev-erb α also regulates inflammation by targeting the NF- κ B responsive genes IL-6 and Cox-2 (9). Rev-erb α lacks the activation function 2 domain required for ligand-dependent activation of transcription by other members of the nuclear receptor family; thus it behaves as a constitutive repressor protein, recruiting the nuclear receptor co-repressor (N-CoR)/HDAC3 complex to target genes to repress transcription (10).

Specificity/Sensitivity: This antibody detects endogenous levels of Rev-erb α protein. The antibody does not cross-react with other nuclear receptor proteins, including Rev-erb β .

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to the amino terminus of human Rev-erb Rev-erb α protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Harding, H.P. and Lazar, M.A. (1993) *Mol. Cell Biol.* 13, 3113–3121.
- (2) Chawla, A. and Lazar, M.A. (1993) *J. Biol. Chem.* 268, 16265–16269.
- (3) Torra, I.P. et al. (2000) *Endocrinology* 141, 3799–3806.



Western blot analysis of cell lysates from 293, HepG2, H-4-II-E, COS and RAW cells, using Rev-erb α Antibody.

- (4) Preitner, N. et al. (2002) *Cell* 110, 251–260.
- (5) Vu-Dac, N. et al. (1998) *J. Biol. Chem.* 273, 25713–25720.
- (6) Coste, H. and Rodríguez, J.C. (2002) *J. Biol. Chem.* 277, 27120–27129.
- (7) Raspé, E. et al. (2002) *J. Lipid Res.* 43, 2172–2179.
- (8) Yin, L. et al. (2006) *Science* 311, 1002–1005.
- (9) Migita, H. et al. (2004) *FEBS Lett.* 561, 69–74.
- (10) Yin, L. and Lazar, M.A. (2005) *Mol. Endocrinol.* 19, 1452–1459.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA and 50% glycerol. Store at -20° C.
Do not aliquot the antibody.

*Species cross-reactivity is determined by Western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000
Immunoprecipitation 1:25

For application specific protocols please see:
www.cellsignal.com/support/protocols/

Companion Products:

- GSK-3 β (27C10) Rabbit mAb #9315
- GSK-3 β Kinase #7436
- Phospho-GSK-3 β (Ser9) Antibody #9336
- Histone Deacetylase 3 (HDAC3) Antibody #2632
- Interleukin-6 (IL-6) #9954
- Cox2 Antibody #4842
- Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO® Reagent and 20X Peroxide #7003

IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E—ELISA
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebra fish B—bovine
Dg—Dog Pg—Pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.