

Phospho-Rev-erba (Ser55/59) Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Transfected Only	80	Rabbit	#P20393	9572

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

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

Specificity/Sensitivity

Phospho-Rev-erba (Ser55/59) Antibody detects transfected levels of Rev-erba protein when phosphorylated at Ser55/59. The antibody does not cross-react with other nuclear receptor proteins, including Rev-erbβ.

Species predicted to react based on 100% sequence homology

Mouse, Rat, Bovine

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser55 and Ser59 of human Rev-erba. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Reverse orientation c-erbA gene α (Rev-erba, EAR-1, or NR1D1) is a widely expressed member of the orphan nuclear receptor family of proteins (1). Rev-erba 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-erba potentiates the adipocyte differentiation of 3T3-L1 cells (2). In addition, expression oscillates with circadian rhythm in liver cells and Rev-erba regulates expression of BMAL1, ApoA-I and ApoC-III, all key regulators of circadian rhythm (3-7). Phosphorylation of Rev-erba Ser55 and Ser59 by GSK-3β appears to stabilize Rev-erba protein levels and is important for synchronizing and maintaining the circadian clock (8). Rev-erba also regulates inflammation by targeting the NF-κB responsive genes IL-6 and COX-2 (9). Rev-erba 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).

Background References

1. Harding, H.P. and Lazar, M.A. (1993) *Mol Cell Biol* 13, 3113-21.
2. Chawla, A. and Lazar, M.A. (1993) *J Biol Chem* 268, 16265-9.
3. Torra, I.P. et al. (2000) *Endocrinology* 141, 3799-806.
4. Preitner, N. et al. (2002) *Cell* 110, 251-60.
5. Vu-Dac, N. et al. (1998) *J Biol Chem* 273, 25713-20.
6. Coste, H. and Rodríguez, J.C. (2002) *J Biol Chem* 277, 27120-9.
7. Raspé, E. et al. (2002) *J Lipid Res* 43, 2172-9.
8. Yin, L. et al. (2006) *Science* 311, 1002-5.
9. Migita, H. et al. (2004) *FEBS Lett* 561, 69-74.
10. Yin, L. and Lazar, M.A. (2005) *Mol Endocrinol* 19, 1452-9.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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