

#2129 Store at -20°C

Phospho-Rev-erb α (Ser55/59) Antibody


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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	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 μ g/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Phospho-Rev-erb α (Ser55/59) Antibody detects transfected levels of Rev-erb α protein when phosphorylated at Ser55/59. The antibody does not cross-react with other nuclear receptor proteins, including Rev-erb β .	
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-erb α . Antibodies are purified by protein A and peptide affinity chromatography.	
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 (3-7). 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).	
Background References	<ol style="list-style-type: none"> Harding, H.P. and Lazar, M.A. (1993) <i>Mol Cell Biol</i> 13, 3113-21. Chawla, A. and Lazar, M.A. (1993) <i>J Biol Chem</i> 268, 16265-9. Torra, I.P. et al. (2000) <i>Endocrinology</i> 141, 3799-806. Preitner, N. et al. (2002) <i>Cell</i> 110, 251-60. Vu-Dac, N. et al. (1998) <i>J Biol Chem</i> 273, 25713-20. Coste, H. and Rodríguez, J.C. (2002) <i>J Biol Chem</i> 277, 27120-9. Raspé, E. et al. (2002) <i>J Lipid Res</i> 43, 2172-9. Yin, L. et al. (2006) <i>Science</i> 311, 1002-5. Migita, H. et al. (2004) <i>FEBS Lett</i> 561, 69-74. Yin, L. and Lazar, M.A. (2005) <i>Mol Endocrinol</i> 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	WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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