

#8965 Store at -20C

RAR γ 1 (D3A4) XP[®] Rabbit mAb



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|---|---------------------------|-----------------------------------|------------------------|--------------------------------------|-------------------------------|--------------------------------|
| Applications: W, IP, IHC-P, IF-1C, FC-FP | Reactivity: H M | Sensitivity: Endogenous | MW (kDa): 58 | Source/Isotype: Rabbit IgG | UniProt ID: #P13631 | Entrez-Gene Id: 5916 |
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Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunohistochemistry (Paraffin)
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:100
1:200 - 1:800
1:400 - 1:800
1:400 - 1:1600

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #82517.

Specificity/Sensitivity

RAR γ 1 (D3A4) XP[®] Rabbit mAb recognizes endogenous levels of total RAR γ 1 protein. Based upon sequence alignment, this antibody is not predicted to cross-react with RAR γ 2. This antibody does not cross-react with either RAR α or RAR β .

Species predicted to react based on 100% sequence homology

Rat, Hamster, Bovine, Dog

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human RAR γ 1 protein.

Background

Nuclear retinoic acid (RA) receptors (RARs) consist of three subtypes encoded by separate genes: α (NR1B1), β (NR1B2), and γ (NR1B3). For each subtype, there are at least two isoforms, which are generated by differential promoter usage and alternative splicing and differ only in their N-terminal regions. Retinoids, which are metabolites of vitamin A, serve as ligands for RARs (1). RARs function as ligand-dependent transcriptional regulators and are found to be heterodimerized with retinoid X receptors (RXRs). These transcriptionally active dimers regulate the expression of genes involved in cellular differentiation, proliferation, and apoptosis (2,3). Consequently, RARs play critical roles in a variety of biological processes, including development, reproduction, immunity, and organogenesis (4-6). RAR mutations, fusion proteins, altered expression levels, or aberrant post-translational modifications result in multiple diseases due to altered RAR function and disruption of homeostasis.

In contrast to the ubiquitously expressed RAR α subtype, RAR γ displays a complex tissue-specific expression pattern (7). The hematopoietic system expresses significant levels of RAR γ , and a recent study identified a role for RAR γ in hematopoietic stem cell maintenance (8). RAR γ is the predominant subtype in human and mouse epidermis, representing 90% of the RARs in this tissue (9-11). Given the high level of RAR γ expression in the skin, it has been suggested that this nuclear receptor participates in a transcriptional program that governs maintenance and differentiation of normal epidermis and skin appendages. The transcriptional activity of RAR γ is under stringent control, in part, through retinoic acid-induced phosphorylation and proteasomal degradation (12).

Background References

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6. Mark, M. et al. (2009) *Nucl Recept Signal* 7, e002.
7. Dollé, P. (2009) *Nucl Recept Signal* 7, e006.
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10. Zelent, A. et al. (1989) *Nature* 339, 714-7.

11. Elder, J.T. et al. (1991) *J Invest Dermatol* 96, 425-33.
12. Gianni, M. et al. (2002) *EMBO J* 21, 3760-9.
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| 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight. |
| Applications Key | W: Western Blotting IP: Immunoprecipitation IHC-P: Immunohistochemistry (Paraffin) IF-IC: Immunofluorescence (Immunocytochemistry) FC-FP: Flow Cytometry (Fixed/Permeabilized) |
| Cross-Reactivity Key | H: Human M: Mouse |
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