

#8965 Store at -20C

RAR γ 1 (D3A4) XP $^{\text{®}}$ Rabbit mAb



Cell Signaling
TECHNOLOGY $^{\text{®}}$

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IHC-P, IF-IC, FC-FP	H M	Endogenous	58	Rabbit IgG	#P13631	5916

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
	Immunoprecipitation	1:100
	Immunohistochemistry (Paraffin)	1:200 - 1:800
	Immunofluorescence (Immunocytochemistry)	1:400 - 1:800
	Flow Cytometry (Fixed/Permeabilized)	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.	
Specificity / Sensitivity	RAR γ 1 (D3A4) XP $^{\text{®}}$ 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	<p>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.</p> <p>In contrast to the ubiquitously expressed RARα subtype, RARγ displays a complex tissue-specific expression pattern (7). The hematopoietic system expresses significant levels of RARγ, and a recent study identified a role for RARγ in hematopoietic stem cell maintenance (8). RARγ is the predominant subtype in human and mouse epidermis, representing 90% of the RARs in this tissue (9-11). Given the high level of RARγ 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 RARγ is under stringent control, in part, through retinoic acid-induced phosphorylation and proteasomal degradation (12).</p>	

Background References

1. Rochette-Egly, C. and Germain, P. (2009) *Nucl Recept Signal* 7, e005.
2. Delacroix, L. et al. (2010) *Mol Cell Biol* 30, 231-44.
3. Eifert, C. et al. (2006) *Mol Reprod Dev* 73, 796-824.
4. Mark, M. et al. (2006) *Annu Rev Pharmacol Toxicol* 46, 451-80.
5. Niederreither, K. and Dollé, P. (2008) *Nat Rev Genet* 9, 541-53.
6. Mark, M. et al. (2009) *Nucl Recept Signal* 7, e002.
7. Dollé, P. (2009) *Nucl Recept Signal* 7, e006.
8. Purton, L.E. et al. (2006) *J Exp Med* 203, 1283-93.

9. Fisher, G.J. et al. (1994) *J Biol Chem* 269, 20629-35.

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.

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

WB: 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 **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

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

XP is a registered trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.