Revision 1

#13163 Store at -20C

CRABP1 (D7F9T) Rabbit mAb

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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IF-F, IF-IC	H M	Endogenous	15	Rabbit IgG	#P29762	1381

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Frozen)	1:800
Immunofluorescence (Immunocytochemistry)	1:800

Storage

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

Specificity / Sensitivity

CRABP1 (D7F9T) Rabbit mAb recognizes endogenous levels of total CRABP1 protein. This antibody does not cross-react with other intracellular lipid-binding protein family members, CRBP1 and CRBP2.

Species predicted to react based on 100% sequence homology:

Rat, Bovine

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu102 of human CRABP1 protein.

Background

Vitamin A gives rise to multiple species of biologically active lipophilic metabolites, known as retinoids, which play a critical role in numerous physiological processes such as vision and embryonic development. Intracellularly, all-*trans* retinoic acid is bound with high affinity to either cellular retinoic acid-binding protein 1 (CRABP1) or cellular retinoic acid-binding protein 2 (CRABP2), which aids in its solubilization within the aqueous cytosolic compartment. Belonging to the intracellular lipid-binding protein family (iLBP), the human CRABPs are 74% identical at the protein level and each CRABP is highly conserved across multiple species. Research studies have shown that knockout of *Crabp1* is not lethal but results in defects in limb development (1), suggesting that CRABP1 plays a role in establishing retinoic acid concentration gradients in the developing limb bud. Although it remains unclear how CRABP1 may regulate the formation of retinoic acid gradients *in vivo*, research studies have suggested that CRABP1 can enhance the activities of intracellular retinoic acid-metabolizing enzymes, thus blunting cellular responses to retinoic acid (2-4).

Background References

1. Lampron, C. et al. (1995) *Development* 121, 539-48.
2. Fujii, H. et al. (1997) *EMBO J* 16, 4163-73.
3. Boylan, J.F. and Gudas, L.J. (1992) *J Biol Chem* 267, 21486-91.
4. Boylan, J.F. and Gudas, L.J. (1991) *J Cell Biol* 112, 965-79.

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 **IF-F:** Immunofluorescence (Frozen)
IF-IC: Immunofluorescence (Immunocytochemistry)

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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