Revision 1

#12574 Store at -20C

DAG Lipase β (D4P7C) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R	Endogenous	70	Rabbit IgG	#Q8NCG7	221955

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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

DAG Lipase β (D4P7C) Rabbit mAb recognizes endogenous levels of total DAG Lipase β protein. In some tissues, this antibody may detect a 48 kDa protein of unknown origin.

Species predicted to react based on 100% sequence homology:

Monkey

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu505 of human DAG Lipase β protein.

Background

Diacylglycerol (DAG) lipases comprise two enzymes called DAG lipase α and β, which are the products of two related genes (1). DAG lipases are transmembrane proteins composed of a short amino-terminal intracellular domain, four transmembrane domains, and a large carboxy-terminal cytoplasmic domain containing the active site. These enzymes are responsible for the biosynthesis of 2-acylglycerol from diacylglycerol in a calcium-dependent manner (1). One of the major endocannabinoid ligands that activate cannabinoid receptors, 2-arachidonyl glycerol (2-AG), is produced by DAG lipases (2). Research studies suggest that DAG lipase α is the isoform primarily responsible for the central production of 2-AG (3). DAG lipase β has been implicated in studies of 2-AG production at the periphery in specific cell types and pathophysiological contexts, such as in hepatic stellate cells during alcohol induced fatty liver (4).

Background References

1. Bisogno, T. et al. (2003) *J Cell Biol* 163, 463-8.
2. Mechoulam, R. et al. (1995) *Biochem Pharmacol* 50, 83-90.
3. Yoshino, H. et al. (2011) *J Physiol* 589, 4857-84.
4. Jeong, W.I. et al. (2008) *Cell Metab* 7, 227-35.

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 **IP:** Immunoprecipitation

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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