

# DAG Lipase $\beta$ (D4P7C) Rabbit mAb

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**For Research Use Only. Not For Use In Diagnostic Procedures.**

Applications W, IP Endogenous	Species Cross-Reactivity* H, M, R, (Mk)	Molecular Wt. 70 kDa	Isotype Rabbit IgG**
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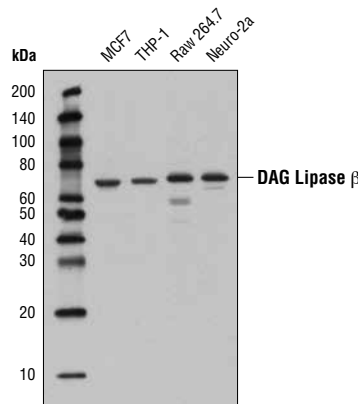
**Background:** Diacylglycerol (DAG) lipases comprise two enzymes called DAG lipase  $\alpha$  and  $\beta$ , which are the products of two related genes (1). DAG lipases are transmembrane proteins composed of a short amino-terminal intracellular domain, four transmembrane domains, and a large carboxy-terminal 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  $\alpha$  is the isoform primarily responsible for the central production of 2-AG (3). DAG lipase  $\beta$  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).

**Specificity/Sensitivity:** DAG Lipase  $\beta$  (D4P7C) Rabbit mAb recognizes endogenous levels of total DAG Lipase  $\beta$  protein. In some tissues, this antibody may detect a 48 kDa protein of unknown origin.

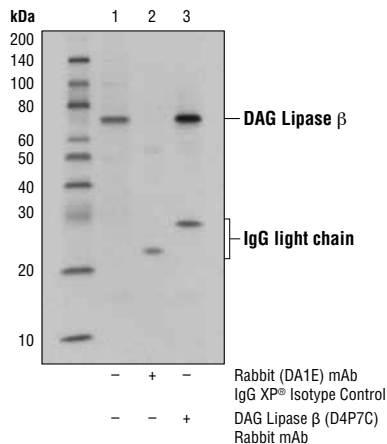
**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu505 of human DAG Lipase  $\beta$  protein.

**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.



Western blot analysis of extracts from various cell lines using DAG Lipase  $\beta$  (D4P7C) Rabbit mAb Rabbit mAb.



Immunoprecipitation of DAG Lipase  $\beta$  from MCF7 cell extracts using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or DAG Lipase  $\beta$  (D4P7C) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using DAG Lipase  $\beta$  (D4P7C) Rabbit mAb.

Entrez-Gene ID #221955  
Swiss-Prot Acc. #Q8NCG7

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting 1:1000  
Immunoprecipitation 1:50

For product specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended complementary products.

**IMPORTANT:** For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.