

#13913 Store at -20C

CAMLG (D5L9J) Rabbit mAb**Cell Signaling**
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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, IP	H M R Hm Mk	Endogenous	32	Rabbit IgG	#P49069	819

Product Usage Information**Application****Dilution**

Western Blotting

1:1000

Immunoprecipitation

1:200

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

CAMLG (D5L9J) Rabbit mAb recognizes endogenous levels of total CAMLG protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu110 of human CAMLG protein.

Background

The calcium signal-modulating cyclophilin ligand (CAMLG) is a multi-pass endoplasmic reticulum (ER) membrane protein that plays an important role in calcium-mediated signal transduction. The CAMLG protein was first identified in T lymphocytes as a cyclophilin B-binding protein that regulates calcium influx following T-cell receptor (TCR) activation (1). Research studies indicate that CAMLG overexpression activates the transcription factors NFAT and NF-IL2A and leads to increased IL-2 gene transcription, providing additional evidence that CAMLG plays an important role in TCR signal transduction. CAMLG negatively regulates the non-receptor protein kinase Lck, which is critical for the thymocyte selection process (2). Thymocytes deficient for CAMLG fail to undergo normal development, accumulate reactive oxygen species, and exhibit increased apoptosis in response to cytotoxic stimuli (3). The CAMLG protein also acts as a receptor of TRC40, an ATPase that targets newly synthesized proteins in the secretory pathway to the ER membrane. CAMLG interacts with the protein insertion receptor WRB to form the TRC40 receptor complex that is responsible for insertion of tail-anchored proteins into the ER membrane (4).

Background References

1. Bram, R.J. and Crabtree, G.R. (1994) *Nature* 371, 355-8.
2. Tran, D.D. et al. (2005) *Immunity* 23, 139-52.
3. Edgar, C.E. et al. (2010) *Cell Death Differ* 17, 1566-76.
4. Yamamoto, Y. and Sakisaka, T. (2012) *Mol Cell* 48, 387-97.

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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