

For Research Use Only

Phospho-CAD (Ser1859) Recombinant monoclonal antibody

Catalog Number: 87337-1-RR



Basic Information

Catalog Number:

87337-1-RR

Source:

Rabbit

Isotype:

IgG

GenBank Accession Number:

NM_004341

GeneID (NCBI):

790

UNIPROT ID:

P27708

Full Name:

carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase

Calculated MW:

2225 aa, 243 kDa

Observed MW:

250 kDa

Purification Method:

Protein A purification

CloneNo.:

252640E4

Recommended Dilutions:

WB: 1:2000-1:10000

Applications

Tested Applications:

WB, ELISA

Species Specificity:

human

Positive Controls:

WB: HeLa cells, HEK-293 cells, λ phosphatase treated HEK-293 cells, λ phosphatase treated HeLa cells

Background Information

CAD (carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase) is a multifunctional enzyme required for the de novo synthesis of pyrimidine nucleotides. Phospho-CAD (Ser1859) is a phosphorylated form of the CAD (carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase) enzyme at Serine 1859. This site is specifically phosphorylated by mTOR complex 1 (mTORC1), acting through the downstream kinase S6K1, and plays a role in regulating pyrimidine biosynthesis. The phosphorylation of CAD at Ser1859 is a part of the PI3K-AKT-mTORC1-S6K1 pathway that integrates growth signals to regulate cell growth, proliferation, and homeostasis by modulating several anabolic and catabolic processes. In addition, insulin also stimulates the Ser1859 phosphorylation of CAD in a manner sensitive to rapamycin as well as phosphatase and tensin homolog (PTEN) deletion in the PI3K-AKT pathway. (PMID:25422319, PMID: 34638594)

Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

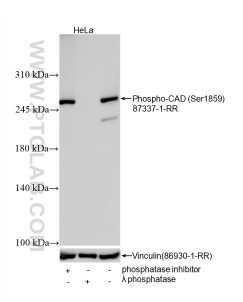
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This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

Selected Validation Data



Non-treated HeLa cells, phosphatase inhibitor treated HeLa cells and λ phosphatase treated HeLa cells were subjected to SDS PAGE followed by western blot with 87337-1-RR (Phospho-CAD (Ser1859) antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. The membrane was stripped and re-blotted with Vinculin (86930-1-RR) antibody as a loading control.