

Product Name: CAD (phospho Thr456) Rabbit Polyclonal Antibody
Catalog #: APRab04348

Summary

Production Name	CAD (phospho Thr456) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	IHC-P,IF-P,IF-F,ICC/IF,ELISA
Reactivity	Human,Mouse

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	CAD
Alternative Names	CAD; CAD protein
Gene ID	790.0
SwissProt ID	P27708.The antiserum was produced against synthesized peptide derived from human CAD around the phosphorylation site of Thr456. AA range:422-471

Application

Dilution Ratio	IHC-P 1:100-1:300, ELISA 1:5000, IF-P/IF-F/ICC/IF 1:50-200
Molecular Weight	

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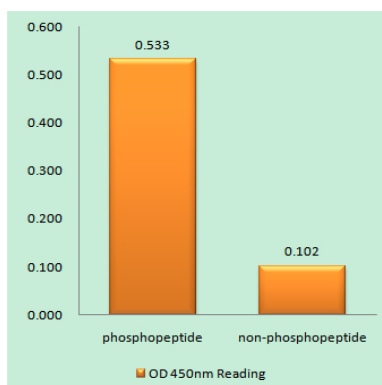
Background

The de novo synthesis of pyrimidine nucleotides is required for mammalian cells to proliferate. This gene encodes a trifunctional protein which is associated with the enzymatic activities of the first 3 enzymes in the 6-step pathway of pyrimidine biosynthesis: carbamoylphosphate synthetase (CPS II), aspartate transcarbamoylase, and dihydroorotase. This protein is regulated by the mitogen-activated protein kinase (MAPK) cascade, which indicates a direct link between activation of the MAPK cascade and de novo biosynthesis of pyrimidine nucleotides. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Apr 2015], catalytic activity: (S)-dihydroorotate + H₂O = N-carbamoyl-L-aspartate, catalytic activity: 2 ATP + L-glutamine + HCO₃⁽⁻⁾ + H₂O = 2 ADP + phosphate + L-glutamate + carbamoyl phosphate, catalytic activity: Carbamoyl phosphate + L-aspartate = phosphate + N-carbamoyl-L-aspartate, cofactor: Binds 1 zinc ion per subunit (for dihydroorotase activity), enzyme regulation: Allosterically regulated and controlled by phosphorylation. 5-phosphoribose 1-diphosphate is an activator while UMP is an inhibitor of the CPSase reaction, function: This protein is a "fusion" protein encoding four enzymatic activities of the pyrimidine pathway (GATase, CPSase, ATCase and DHOase), miscellaneous: GATase (glutamine amidotransferase) and CPSase (carbamoyl phosphate synthase) form together the glutamine-dependent CPSase (GD-CPSase) (EC 6.3.5.5), online information: Aspartate carbamoyltransferase entry, pathway: Pyrimidine metabolism; UMP biosynthesis via de novo pathway; UMP from HCO₃⁽⁻⁾: step 1/6, pathway: Pyrimidine metabolism; UMP biosynthesis via de novo pathway; UMP from HCO₃⁽⁻⁾: step 2/6, pathway: Pyrimidine metabolism; UMP biosynthesis via de novo pathway; UMP from HCO₃⁽⁻⁾: step 3/6, similarity: Belongs to the ATCase/OTCase family, similarity: Contains 1 glutamine amidotransferase type-1 domain, similarity: Contains 2 ATP-grasp domains, similarity: In the central section; belongs to the DHOase family, subunit: Homohexamer,

Research Area

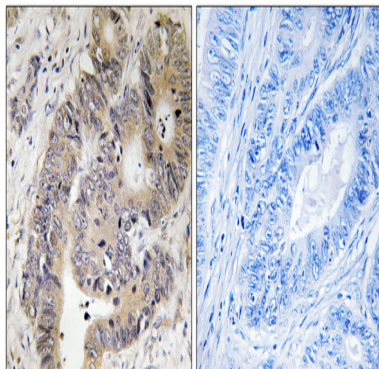
Pyrimidine metabolism; Alanine; aspartate and glutamate metabolism;

Image Data



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using CAD (Phospho-Thr456) Antibody

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Immunohistochemistry analysis of paraffin-embedded human colon carcinoma, using CAD (Phospho-Thr456) Antibody.
The picture on the right is blocked with the phospho peptide.

Note

For research use only.