

**CAD (phospho Thr456) Polyclonal Antibody**

<b>Catalog No :</b>	YP1083
<b>Reactivity :</b>	Human;Mouse
<b>Applications :</b>	IHC;IF;ELISA
<b>Target :</b>	CAD
<b>Fields :</b>	>>Pyrimidine metabolism;>>Alanine, aspartate and glutamate metabolism;>>Metabolic pathways;>>Biosynthesis of cofactors
<b>Gene Name :</b>	CAD
<b>Protein Name :</b>	CAD protein
<b>Human Gene Id :</b>	790
<b>Human Swiss Prot No :</b>	P27708
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human CAD around the phosphorylation site of Thr456. AA range:422-471
<b>Specificity :</b>	Phospho-CAD (T456) Polyclonal Antibody detects endogenous levels of CAD protein only when phosphorylated at T456.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	IHC 1:100 - 1:300. ELISA: 1:5000.. IF 1:50-200
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Concentration :</b>	1 mg/ml
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)

**Molecularweight :** 243kD

**Cell Pathway :** Pyrimidine metabolism;Alanine; aspartate and glutamate metabolism;

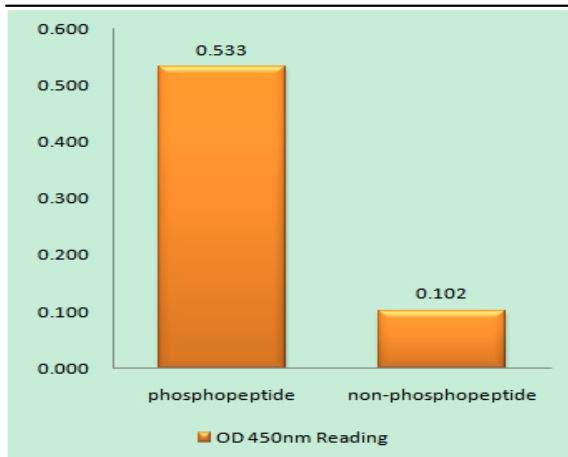
**Background :** The de novo synthesis of pyrimidine nucleotides is required for mammalian cells to proliferate. This gene encodes a trifunctional protein which is associated with the enzymatic activities of the first 3 enzymes in the 6-step pathway of pyrimidine biosynthesis: carbamoylphosphate synthetase (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],

**Function :** catalytic activity:(S)-dihydroorotate + H(2)O = N-carbamoyl-L-aspartate.,catalytic activity:2 ATP + L-glutamine + HCO(3)(-) + H(2)O = 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:Pyrimi

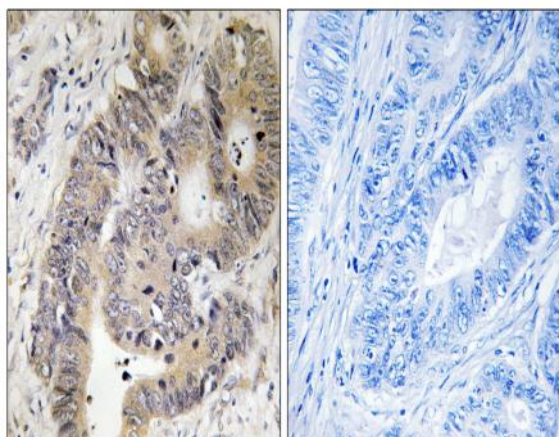
**Subcellular Location :** Cytoplasm . Nucleus . Cytosolic and unphosphorylated in resting cells, translocates to the nucleus in response to EGF stimulation, nuclear import promotes optimal cell growth.

**Expression :** Colon adenocarcinoma,Epithe

## Products Images



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



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