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CAD Antibody

Rabbit mAb
Catalog # AP92339

Product Information

Application	WB, IF, FC, ICC, IP
Primary Accession	P27708
Reactivity	Human
Clonality	Monoclonal
Other Names	Aspartate transcarbamylase; CAD protein; CAD trifunctional protein; Carbamoyl phosphate synthetase 2; CPSase ATCase DHOase; Dihydroorotase;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	242984

Additional Information

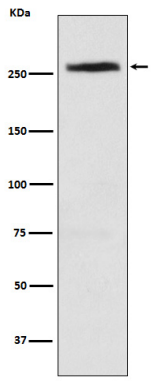
Dilution	WB 1:500~1:1000 ICC/IF 1:50~1:200 IP 1:30 FC 1:80
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human CAD
Description	Carbamoyl phosphate synthetase-aspartate carbamoyltransferase-dihydroorotase (CAD) is a multifunctional protein that initiates and regulates mammalian de novo pyrimidine biosynthesis.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	CAD (HGNC:1424)
Function	Multifunctional protein that encodes the first 3 enzymatic activities of the de novo pyrimidine pathway: carbamoylphosphate synthetase (CPSase; EC 6.3.5.5), aspartate transcarbamylase (ATCase; EC 2.1.3.2) and dihydroorotase (DHOase; EC 3.5.2.3). The CPSase-function is accomplished in 2 steps, by a glutamine-dependent amidotransferase activity (GATase) that binds and cleaves glutamine to produce ammonia, followed by an ammonium-dependent carbamoyl phosphate synthetase, which reacts with the ammonia, hydrogencarbonate and ATP to form carbamoyl phosphate. The endogenously produced carbamoyl phosphate is sequestered and channeled to the ATCase active site. ATCase then catalyzes the formation of carbamoyl-L-aspartate from L-aspartate and carbamoyl phosphate. In the last step, DHOase catalyzes the cyclization of carbamoyl aspartate to dihydroorotate.
Cellular Location	Cytoplasm. Nucleus. Note=Cytosolic and unphosphorylated in resting cells,

translocates to the nucleus in response to EGF stimulation, nuclear import promotes optimal cell growth

Images



Western blot analysis of CAD expression in HeLa cell lysate.

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