

Anti-CAD Rabbit Monoclonal Antibody

Catalog # ABO15759

Product Information

Application	WB, IF, ICC, IP, FC
Primary Accession	P27708
Host	Rabbit
Isotype	IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-CAD Rabbit Monoclonal Antibody . Tested in WB, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human.

Additional Information

Gene ID	790
Other Names	Multifunctional protein CAD, Carbamoyl phosphate synthetase 2-aspartate transcarbamylase-dihydroorotase, Glutamine-dependent carbamoyl phosphate synthase, 6.3.5.5, Glutamine amidotransferase, GATase, GLNase, 3.5.1.2, Aspartate carbamoyltransferase, 2.1.3.2, Dihydroorotase, 3.5.2.3, CAD (HGNC:1424)
Calculated MW	242984
Application Details	WB 1:500-1:1000 ICC/IF 1:50-1:200 IP 1:30 FC 1:80
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 23C35
Immunogen	A synthesized peptide derived from human CAD
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	CAD (HGNC:1424)
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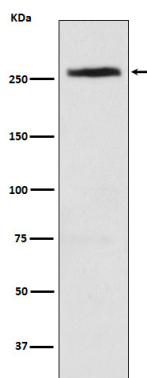
Function

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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