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# CAD Antibody

Rabbit mAb
Catalog # AP92339

## Product Information

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|---|---|
| **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

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|---|---|
| **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

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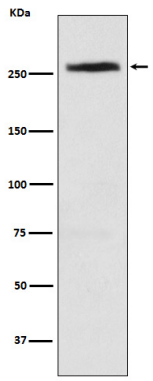
| **Name** | CAD ( HGNC:1424) |
| **Function** | Multifunctional protein that encodes the first 3 enzymatic activities of the de novo pyrimidine pathway: carbamoylphosphate synthetase (CPSase; EC 6.3.5.5), aspartate transcarbamylase (ATCase; EC 2.1.3.2) and dihydroorotase (DHOase; EC 3.5.2.3). The CPSase-function 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.