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# CAD Antibody
**Rabbit Polyclonal Antibody**
**Catalog # ALS13239**

## Specification

### CAD Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC-P** |
| Primary Accession | P27708 |
| Reactivity | **Human** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Calculated MW | **243kDa KDa** |
| Dilution | **WB~~1:1000**<br>**IHC-P~~N/A** |

### CAD Antibody - Additional Information

**Gene ID** 790

**Other Names**
CAD protein, Glutamine-dependent carbamoyl-phosphate synthase, 6.3.5.5, Aspartate carbamoyltransferase, 2.1.3.2, Dihydroorotase, 3.5.2.3, CAD

**Target/Specificity**
Human CAD. Predicted cross-reactivity based on amino acid sequence homology: mouse (92%), rat (92%).

**Reconstitution & Storage**
Aliquot and store at -20°C. Minimize freezing and thawing.

**Precautions**
CAD Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### CAD Antibody - 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

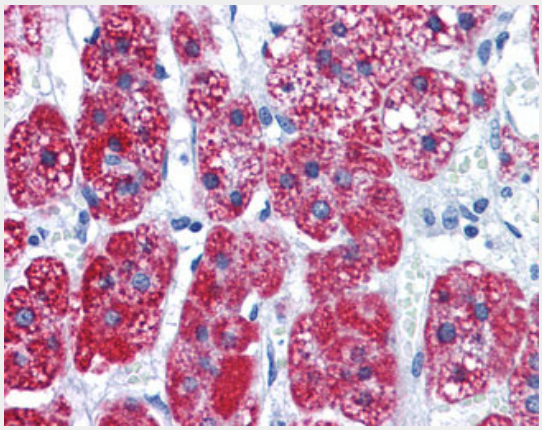
**Volume**
100 µl

## CAD Antibody - Protocols

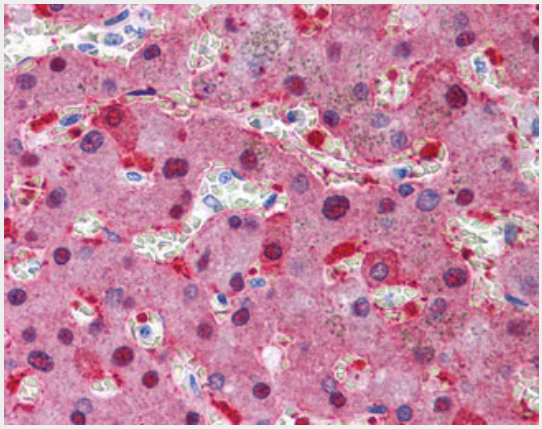
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## CAD Antibody - Images



Anti-CAD antibody IHC of human adrenal.



Anti-CAD antibody IHC of human liver.

## CAD Antibody - Background

This protein is a "fusion" protein encoding four enzymatic activities of the pyrimidine pathway (GATase, CPSase, ATCase and DHOase).

**CAD Antibody - References**

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Davidson J.N.,et al.DNA Cell Biol. 9:667-676(1990).
Zimmermann B.H.,et al.Biochemistry 34:7038-7046(1995).