

## Product datasheet

# Anti-CAD antibody [EP710Y] $\alpha$ b40800

Recombinant RabMAb

[9 References](#) [8 Images](#)

### Overview

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<b>Product name</b>	Anti-CAD antibody [EP710Y]
<b>Description</b>	Rabbit monoclonal [EP710Y] to CAD
<b>Host species</b>	Rabbit
<b>Specificity</b>	ab40800 is specific to the N-terminus of CAD.
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt (Intra), ICC/IF, WB, IP
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: HeLa and HEK293 cell lysate. ICC/IF: HeLa cells. Flow Cyt (intra): HeLa cells. IP: HeLa whole cell lysate ( <a href="#">ab150035</a> ).
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 0.05% BSA, 59% PBS
<b>Purity</b>	Protein A purified

<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EP710Y
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab40800 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/120.
ICC/IF		1/100 - 1/300.
WB		1/1000. Predicted molecular weight: 243 kDa.
IP		1/30 - 1/50.

## Target

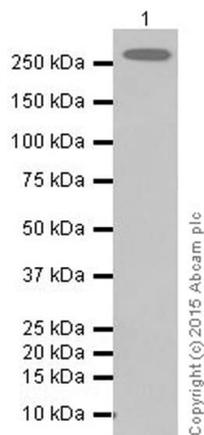
### Relevance

Carbamoyl phosphate synthetase-aspartate carbamoyltransferase-dihydroorotase (CAD) is a multifunctional protein that initiates and regulates mammalian de novo pyrimidine biosynthesis. This trifunctional protein which is associated with the enzymatic activities of the first 3 enzymes in the 6-step pathway of pyrimidine biosynthesis is the rate-limiting step in the de novo pyrimidine synthetic pathway. Although most of the CAD protein in the cell is cytosolic, phosphorylation at threonine 456 localizes the protein to the nucleus. While MAPK and EGF phosphorylate CAD at threonine 456, MAPK and c-myc have been found to induce over-expression of CAD.

### Cellular localization

Cytoplasmic and Nuclear

## Images



Western blot - Anti-CAD antibody [EP710Y] (ab40800)

Anti-CAD antibody [EP710Y] (ab40800) at 1/2000 dilution (purified)  
+ HeLa cell lysate at 10 µg

### Secondary

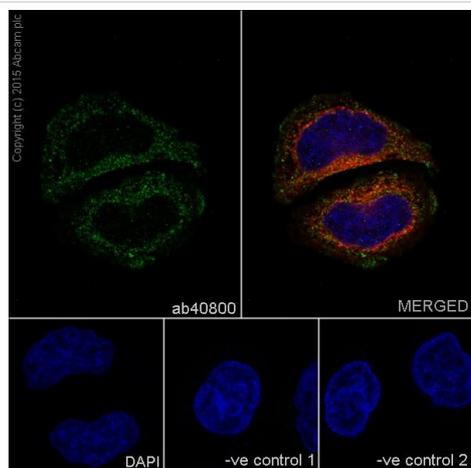
HRP goat anti-rabbit IgG (H+L) at 1/20000 dilution

**Predicted band size:** 243 kDa

**Observed band size:** 250 kDa

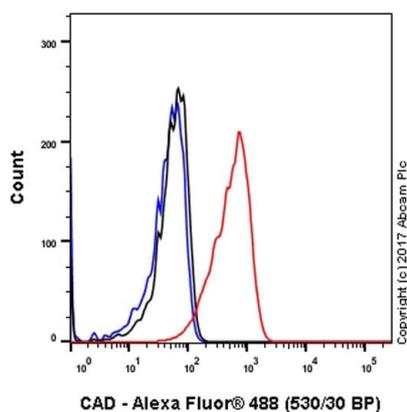
Blocking buffer: 5% NFD/MTBST

Dilution buffer: 5% NFD/MTBST



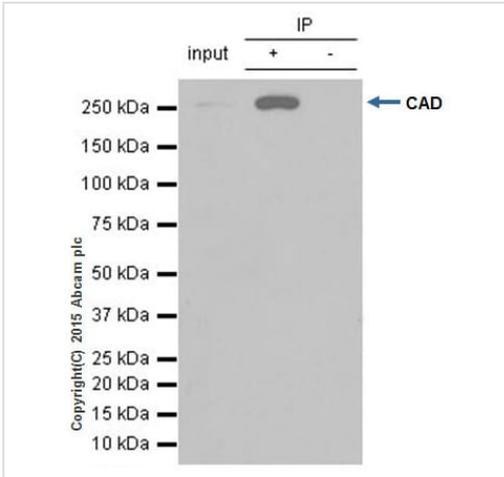
Immunocytochemistry/ Immunofluorescence - Anti-CAD antibody [EP710Y] (ab40800)

Immunofluorescence staining of HeLa cells with purified ab40800 at a working dilution of 1/300, counter-stained with DAPI. The secondary antibody was Alexa Fluor® 488 goat anti-rabbit (**ab150077**), used at a dilution of 1/1000. **ab7291**, a mouse anti-tubulin antibody (1/1000), was used to stain tubulin along with **ab150120** (Alexa Fluor® 594 goat anti-mouse, 1/1000), shown in the top right hand panel. The cells were fixed in 4% PFA and permeabilized using 0.1% Triton X 100. The negative controls are shown in bottom middle and right hand panels - for negative control 1, purified ab40800 was used at a dilution of 1/500 followed by an Alexa Fluor® 594 goat anti-mouse antibody (**ab150120**) at a dilution of 1/500. For negative control 2, **ab7291** (mouse anti-tubulin) was used at a dilution of 1/500 followed by an Alexa Fluor® 488 goat anti-rabbit antibody (**ab150077**) at a dilution of 1/400.



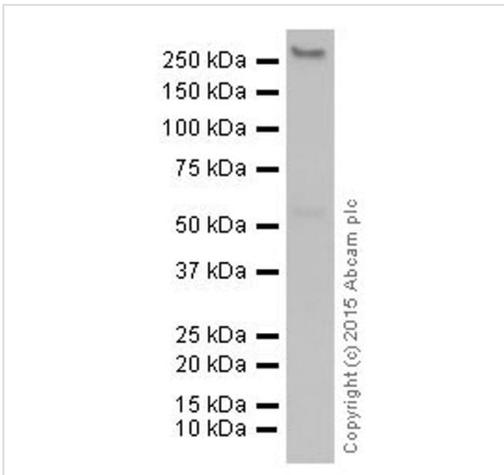
Flow Cytometry (Intracellular) - Anti-CAD antibody [EP710Y] (ab40800)

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling CAD (red) with ab40800 at a 1/120 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (**ab172730**). Blue (unlabeled control) - Cells without incubation with the primary and secondary antibodies.



Immunoprecipitation - Anti-CAD antibody [EP710Y]  
(ab40800)

ab40800 (purified) at 1/30 immunoprecipitating CAD in 10 µg HeLa (Lanes 1 and 2, observed at 250 kDa). Lane 3 - PBS. For western blotting, HRP Veriblot for IP (**ab131366**) was used for detection (1/10 000). Blocking buffer and concentration: 5% NFDm/TBST Dilution buffer and concentration: 5% NFDm/TBST



Western blot - Anti-CAD antibody [EP710Y]  
(ab40800)

Anti-CAD antibody [EP710Y] (ab40800) at 1/1000 dilution (purified)  
+ HeLa cell lysate at 1/20000 dilution

#### Secondary

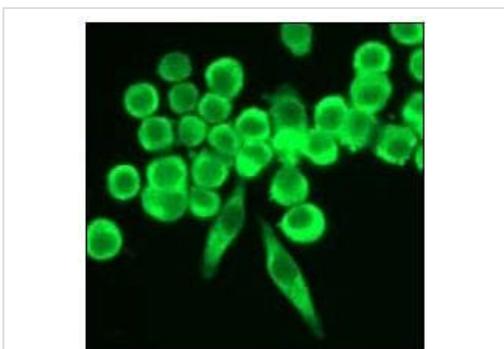
HRP goat anti-rabbit IgG (H+L) at 1/20000 dilution

**Predicted band size:** 243 kDa

**Observed band size:** 250 kDa

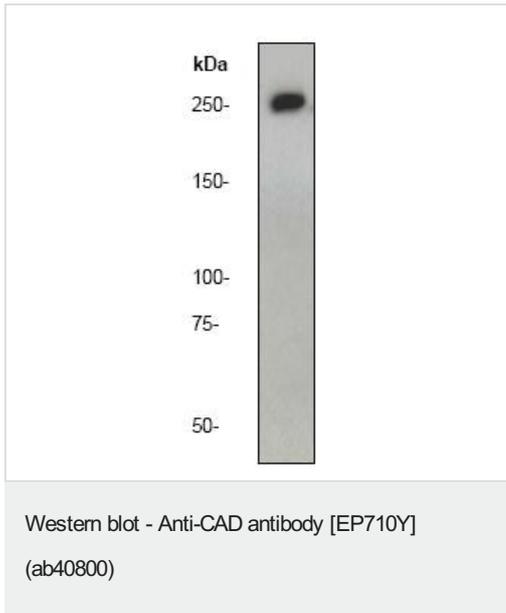
Blocking buffer: 5% NFDm/TBST

Dilution buffer: 5% NFDm/TBST



Immunocytochemistry/ Immunofluorescence - Anti-CAD antibody [EP710Y] (ab40800)

Unpurified ab40800 (1/100), staining human CAD (N-term) in HeLa cells by Immunofluorescence.



Anti-CAD antibody [EP710Y] (ab40800) at 1/1000 dilution (unpurified) + HEK-293 whole cell lysate (**ab7902**) at 10 µg

**Predicted band size:** 243 kDa

**Observed band size:** 250 kDa

Why choose a recombinant antibody?

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

Anti-CAD antibody [EP710Y] (ab40800)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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