

**#4454** Store at -20C

# CCT $\alpha$ Antibody


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**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> WB, IP	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 42	<b>Source:</b> Rabbit	<b>UniProt ID:</b> #P49585	<b>Entrez-Gene Id:</b> 5130
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## Product Usage Information

### Application

Western Blotting

Immunoprecipitation

### Dilution

1:1000

1:50

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

## Specificity / Sensitivity

CCT $\alpha$  Antibody detects endogenous levels of total CCT $\alpha$  protein.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human CCT $\alpha$  protein. Antibodies were purified by protein A and peptide affinity chromatography.

## Background

CTP:phosphocholine cytidyltransferase (CCT) is a critical enzyme that regulates the CDP-choline pathway for the biosynthesis of phosphatidylcholine. Three distinct CCT isoforms are found in mammals, including CCT $\alpha$ , CCT $\beta$ 2, and CCT $\beta$ 3 (1,2). CCT $\alpha$  is the major isoform that is expressed in most tissues (3). CCT $\alpha$  is essential in the synthesis and secretion of surfactant by alveolar epithelial cells and is important in maintaining the phosphatidylcholine level that regulates lipoprotein assembly and secretion in hepatocytes (4,5). CCT $\alpha$  is a major component in membrane biogenesis during cytokine secretion by stimulated macrophages (6). Monoubiquitination of CCT $\alpha$  prevents it from entering the nucleus and leads to its degradation by lysosome (7).

## Background References

1. Jackowski, S. and Fagone, P. (2005) *J Biol Chem* 280, 853-6.
2. Clement, J.M. and Kent, C. (1999) *Biochem Biophys Res Commun* 257, 643-50.
3. Karim, M. et al. (2003) *Biochim Biophys Acta* 1633, 1-12.
4. Tian, Y. et al. (2007) *Mol Cell Biol* 27, 975-82.
5. Jacobs, R.L. et al. (2004) *J Biol Chem* 279, 47402-10.
6. Tian, Y. et al. (2008) *J Cell Biol* 181, 945-57.
7. Chen, B.B. and Mallampalli, R.K. (2009) *Mol Cell Biol* 29, 3062-75.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**WB:** Western Blotting **IP:** Immunoprecipitation

## Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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