

#6931 Store at -20C

**CCT $\alpha$  (D18B6) Rabbit mAb****Cell Signaling**  
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	42	Rabbit IgG	#P49585	5130

**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, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.**Specificity / Sensitivity**CCT $\alpha$  (D18B6) Rabbit mAb recognizes endogenous levels of total CCT $\alpha$  protein.**Source / Purification**Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human CCT $\alpha$  protein.**Background**

CTP:phosphocholine cytidylyltransferase (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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