

#12294 Store at -20C

## CUEDC2 Antibody

Cell Signaling  
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H Mk	Endogenous	30-32	Rabbit	#Q9H467	79004

## Product Usage Information

## Application

Western Blotting  
Immunoprecipitation

## Dilution

1:1000  
1:100

## Storage

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

## Specificity / Sensitivity

CUEDC2 Antibody recognizes endogenous levels of total CUEDC2 protein.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human CUEDC2 protein. Antibodies are purified by protein A and peptide affinity chromatography.

## Background

CUE domain-containing 2 (CUEDC2) protein is involved in regulating many cellular events including cell cycle regulation (1) and inflammation (2). Research studies have shown that CUEDC2 is highly expressed in many types of tumors, suggesting this protein may play a role in tumorigenesis (1,3). CUEDC2 is activated in early mitosis when it is phosphorylated by Cdk1 at Ser110. Phosphorylated CUEDC2 binds to Cdc20, which leads to the release of the anaphase-promoting complex/cyclosome (APC/C) from checkpoint inhibition, initiating anaphase. CUEDC2 is then dephosphorylated when cells exit mitosis (1). CUEDC2 is also an inhibitor of IKKα and IKKβ activation (2) as well as Jak1/Stat3 signaling (4). Research indicates that inappropriate regulation of CUEDC2 may contribute to tumor development by causing chromosome instability (1). Multiple studies have reported that CUEDC2 plays a role in the downregulation of progesterone receptor and estrogen receptor α, impairing the effects of progesterone on breast cancer cell growth. Conversely, research studies have shown that CUEDC2 and HER2 expression have a significant positive correlation in breast cancers, leading investigators to suggest that CUEDC2 could be an important target for breast cancer therapy (3,5).

## Background References

1. Gao, Y.F. et al. (2011) *Nat Cell Biol* 13, 924-33.
2. Li, H.Y. et al. (2008) *Nat Immunol* 9, 533-41.
3. Pan, X. et al. (2011) *Nat Med* 17, 708-14.
4. Zhang, W.N. et al. (2012) *J Biol Chem* 287, 382-92.
5. Zhang, P.J. et al. (2007) *EMBO J* 26, 1831-42.

## 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 nonfat dry milk, 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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