

#4529 Store at -20C

# MED12 Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	240	Rabbit	#Q93074	9968

## 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 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

MED12 Antibody recognizes endogenous levels of total MED12 protein.

## Species predicted to react based on 100% sequence homology

Hamster, Bovine, Pig, Horse

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human MED12 protein. Antibodies are purified by protein A and peptide affinity chromatography.

## Background

The mediator complex consists of about 25-30 proteins and is thought to facilitate transcription activation by acting as a molecular bridge between the RNA polymerase II (RNAPII) machinery and transcription factors (1). Mediator is recruited to target genes by transcription factors and plays an essential role in the recruitment and stabilization of the RNAPII transcription complex at promoters, as well as the activation of transcription post RNAPII recruitment (1-5). The mediator complex also plays an important role in creating 'chromatin loops' that occur as a result of interactions between the transcription factor bound at distal enhancers and RNAPII bound at the proximal promoter, and works to sustain proper chromatin architecture during active transcription (6-8). MED12 is part of the CDK8 submodule of the Mediator complex and is required for the stable interaction of this module with the rest of the Mediator complex (1,9). The CDK8 module has been shown to be both a negative and positive regulator of transcription depending on the gene context. The CDK8 module may repress transcription by inhibiting the ability of Mediator to recruit RNAPII (10). In addition, the MED12 subunit can recruit the methyltransferase G9a to methylate histone H3K9 to repress a subset of neuronal genes in non-neuronal cells (11). MED12 and the CDK8 module can also positively regulate transcription of Wnt-responsive genes through its interaction with β-catenin, and p53-regulated genes upon UV-induced DNA damage (1,9,12).

## Background References

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4. Malik, S. et al. (2002) *Mol Cell Biol* 22, 5626-37.
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6. Kagey, M.H. et al. (2010) *Nature* 467, 430-5.
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9. Kim, S. et al. (2006) *J Biol Chem* 281, 14066-75.
10. Knuesel, M.T. et al. (2009) *Genes Dev* 23, 439-51.
11. Ding, N. et al. (2008) *Mol Cell* 31, 347-59.
12. Galbraith, M.D. et al. (2010) *Transcription* 1, 4-12.

## 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

**W:** Western Blotting **IP:** Immunoprecipitation

## Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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