

p300 (D1M7C) Rabbit mAb

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Applications: W, IP	Reactivity: H M Mk	Sensitivity: Endogenous	MW (kDa): 300	Source/Isotype: Rabbit IgG	UniProt ID: #Q09472	Entrez-Gene Id: 2033
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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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

p300 (D1M7C) Rabbit mAb recognizes endogenous levels of total p300 protein. This antibody does not cross-react with CBP protein.

Species predicted to react based on 100% sequence homology

Chicken, Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu64 of human p300 protein.

Background

CBP (CREB-binding protein) and p300 are highly conserved and functionally related transcriptional co-activators that associate with transcriptional regulators and signaling molecules, integrating multiple signal transduction pathways with the transcriptional machinery (1,2). CBP/p300 also contain histone acetyltransferase (HAT) activity, allowing them to acetylate histones and other proteins (2). Phosphorylation of p300 at Ser89 by PKC represses its transcriptional activity, and phosphorylation at the same site by AMPK disrupts the association of p300 with nuclear receptors (3,4). Ser1834 phosphorylation of p300 by Akt disrupts its association with C/EBPβ (5). Growth factors induce phosphorylation of CBP at Ser437, which is required for CBP recruitment to the transcription complex (6). CaM kinase IV phosphorylates CBP at Ser302, which is required for CBP-dependent transcriptional activation in the CNS (7). The role of acetylation of CBP/p300 is of particular interest (2,8). Acetylation of p300 at Lys1499 has been demonstrated to enhance its HAT activity and affect a wide variety of signaling events (9).

Background References

1. Goodman, R.H. and Smolik, S. (2000) *Genes Dev* 14, 1553-77.
2. Chan, H.M. and La Thangue, N.B. (2001) *J. Cell Sci.* 114, 2363-2373.
3. Yuan, L.W. and Gambée, J.E. (2000) *J. Biol. Chem.* 275, 40946-40951.
4. Yang, W. et al. (2001) *J. Biol. Chem.* 276, 38341-38344.
5. Guo, S. et al. (2001) *J. Biol. Chem.* 276, 8516-8523.
6. Zanger, K. et al. (2001) *Mol. Cell* 7, 551-558.
7. Impey, S. et al. (2002) *Neuron* 34, 235-244.
8. Yuan, L.W. and Giordano, A. (2002) *Oncogene* 21, 2253-2260.
9. Thompson, P.R. et al. (2004) *Nat. Struct. Mol. Biol.* 11, 308-315.

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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

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

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