Revision 8

Store at -20C

#54062

p300 (D2X6N) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, ChIP, C&R, C&T	H	Endogenous	300	Rabbit IgG	#Q09472	2033

Product Usage Information

For optimal ChIP results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10^6 cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

The CUT&Tag dilution was determined using CUT&Tag Assay Kit #77552.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
Chromatin IP	1:50
CUT&RUN	1:50
CUT&Tag	1:50

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 (D2X6N) Rabbit mAb recognizes endogenous levels of total p300 protein. This antibody does not cross-react with CBP protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu733 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 Gambee, 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 **ChIP:** Chromatin IP **C&R:** CUT&RUN **C&T:** CUT&Tag

Cross-Reactivity Key

H: Human

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