Revision 1

Store at -20C

#11912

CHD4 (D8B12) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	260	Rabbit IgG	#Q14839	1108

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	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

CHD4 (D8B12) Rabbit mAb recognizes endogenous levels of total CHD4 protein. Based on sequence alignment, this antibody is not predicted to cross-react with other CHD proteins.

Species predicted to react based on 100% sequence homology

Bovine, Pig, Horse, Guinea Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly1391 of human CHD4 protein.

Background

Chromodomain-helicase-DNA-binding domain (CHD) proteins have been identified in a variety of organisms (1,2). This family of nine proteins is divided into three separate subfamilies: subfamily I (CHD1 and CHD2), subfamily II (CHD3 and CHD4), and subfamily III (CHD5, CHD6, CHD7, CHD8, and CHD9). All CHD proteins contain two tandem amino-terminal chromodomains, a SWI/SNF-related ATPase domain, and a carboxy-terminal DNA-binding domain (1,2). The chromodomains facilitate binding to methylated lysine residues of histone proteins and confer interactions with specific regions of chromatin. The SWI/SNF-related ATPase domain utilizes energy from ATP hydrolysis to modify chromatin structure. CHD proteins are often found in large, multiprotein complexes with their transcriptional activation or repression activity governed by other proteins within the complex. CHD3 (also known as Mi2-α) and CHD4 (also known as Mi2-β) are central components of the nucleosome remodeling and histone deacetylase (NuRD) transcriptional repressor complex, which also contains HDAC1, HDAC2, RBAP48, RBAP46, MTA1, MTA2, MTA3, and MBD3 (3-8). Both CHD3 and CHD4 contain two plant homeodomain (PHD) zinc finger domains that bind directly to HDAC1 and HDAC2.

Background References

1. Hall, J.A. and Georgel, P.T. (2007) *Biochem Cell Biol* 85, 463-76.
2. Marfella, C.G. and Imbalzano, A.N. (2007) *Mutat Res* 618, 30-40.
3. Tong, J.K. et al. (1998) *Nature* 395, 917-21.
4. Xue, Y. et al. (1998) *Mol Cell* 2, 851-61.
5. Zhang, Y. et al. (1998) *Cell* 95, 279-89.
6. Bowen, N.J. et al. (2004) *Biochim Biophys Acta* 1677, 52-7.
7. Jones, P.L. et al. (1998) *Nat Genet* 19, 187-91.
8. Fujita, N. et al. (2003) *Cell* 113, 207-19.

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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