

#4245 Store at -20C

CHD4 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	H M R	Endogenous	260	Rabbit	#Q14839	1108

Product Usage Information

Application

Western Blotting

Dilution

1:1000

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

CHD4 Antibody detects endogenous levels of total CHD4 protein.

Species predicted to react based on 100% sequence homology:

Monkey, Bovine, Horse

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to human CHD4 protein. Antibodies are purified by protein A and peptide affinity chromatography.

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

WB: Western Blotting

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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