Revision 3

#7777 Store at -20C

HMGA1 (D6A4) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC	H Mk	Endogenous	18	Rabbit IgG	#P17096	3159

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
Immunofluorescence (Immunocytochemistry)	1:800 - 1:3200

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

HMGA1 (D6A4) XP® Rabbit mAb recognizes endogenous levels of total HMGA1 protein, isoforms 1a and 1b. Based on sequence homology, this antibody is not predicted to cross-react with HMGA2.

Species predicted to react based on 100% sequence homology:

Bovine

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly68 of human HMGA1 protein.

Background

HMGA1, formerly known as HMG-I/Y, belongs to a family of high mobility group proteins that contain an AT-hook DNA binding domain. HMGA proteins are considered architectural transcription factors; they do not have direct transcriptional activation capacity, but instead regulate gene expression by changing DNA conformation through binding to AT-rich regions in the DNA and/or direct interaction with other transcription factors (1,2). HMGA1 is highly expressed during embryogenesis and in embryonic stem cells, but not in fully differentiated adult tissues (2-4). Research studies have shown that HMGA1 is over-expressed in rapidly dividing neoplastic cells and a wide variety of aggressive cancers, including thyroid, colon, breast, pancreas, and prostate (2-4). Investigators have shown that forced expression of HMGA1 induces cellular transformation and an epithelial-to-mesenchymal transition (EMT), while inhibition of HMGA1 expression blocks anchorage-independent cell growth and proliferation of cancer cells, suggesting that HMGA1 contributes to carcinogenesis by inducing and maintaining a de-differentiated, highly proliferative cell state (5-8).

Background References

1. Cleynen, I. and Van de Ven, W.J. (2008) *Int J Oncol* 32, 289-305.
2. Resar, L.M. (2010) *Cancer Res* 70, 436-9.
3. Chiappetta, G. et al. (1996) *Oncogene* 13, 2439-46.
4. Ben-Porath, I. et al. (2008) *Nat Genet* 40, 499-507.
5. Wood, L.J. et al. (2000) *Mol Cell Biol* 20, 5490-502.
6. Wood, L.J. et al. (2000) *Cancer Res* 60, 4256-61.
7. Xu, Y. et al. (2004) *Cancer Res* 64, 3371-5.
8. Scala, S. et al. (2000) *Proc Natl Acad Sci U S A* 97, 4256-61.

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 **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

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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Limited Uses