

#12734 Store at -20C

HMGN1 (D115O) Rabbit mAb**Cell Signaling**
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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	#P05114	3150

Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:50
1:1000

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

HMGN1 (D115O) Rabbit mAb recognizes endogenous levels of total HMGN1 protein. This antibody does not cross-react with other HMGN proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val32 of human HMGN1 protein.

Background

High mobility group (HMG) proteins are a superfamily of abundant and ubiquitous nuclear proteins that bind DNA without sequence specificity and induce structural changes to the chromatin fiber to regulate access to the underlying DNA. The HMGN family of proteins, which includes five members (HMGN1-5), is characterized by the presence of several conserved protein domains: a positively charged domain, a nucleosome binding domain, and an acidic C-terminal chromatin-unfolding domain (1,2). HMGN proteins function in transcriptional regulation and are recruited to gene promoters by transcription factors, such as estrogen receptor α (ER α), serum responsive factor (SRF), and PITX2, where they can facilitate either gene activation or repression (3-5). HMGN proteins bind specifically to nucleosomal DNA and reduce compaction of the chromatin fiber, in part by competing with linker histone H1 for nucleosome binding (6). In addition, HMGN proteins act to modulate local levels of post-translational histone modifications, decreasing phosphorylation of histone H3 at Ser10 and histone H2A at Ser1 and increasing acetylation of histone H3 at Lys14 (7-9). HMGN proteins can also modulate the activity of several chromatin-remodeling factors and restrict nucleosome mobility (10).

Background References

1. Hock, R. et al. (2007) *Trends Cell Biol* 17, 72-9.
2. Gerlitz, G. *Biochim Biophys Acta* 1799, 80-5.
3. Zhu, N. and Hansen, U. (2007) *Mol Cell Biol* 27, 8859-73.
4. Amen, M. et al. (2008) *Nucleic Acids Res* 36, 462-76.
5. Belova, G.I. et al. (2008) *J Biol Chem* 283, 8080-8.
6. Catez, F. et al. (2002) *EMBO Rep* 3, 760-6.
7. Lim, J.H. et al. (2005) *EMBO J* 24, 3038-48.
8. Lim, J.H. et al. (2004) *Mol Cell* 15, 573-84.
9. Postnikov, Y.V. et al. (2006) *Biochemistry* 45, 15092-9.
10. Rattner, B.P. et al. (2009) *Mol Cell* 34, 620-6.

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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