

**HMGB2 (D1P9V) Rabbit mAb**

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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:
W	H M R Mk	Endogenous	28	Rabbit IgG	#P26583	3148

**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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

HMGB2 (D1P9V) Rabbit mAb recognizes endogenous levels of total HMGB2 protein. This antibody does not cross-react with other HMGB proteins, including HMGB1 and HMGB3.

**Species predicted to react based on 100% sequence homology**

Hamster, Bovine, Dog, Horse, Guinea Pig

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu169 of human HMGB2 protein.

**Background**

High mobility group protein B2 (HMGB2) belongs to a family of highly conserved proteins that contain HMG box domains (1,2). All three family members (HMGB1, HMGB2, and HMGB3) contain two HMG box domains and a C-terminal acidic domain. HMGB1 is a widely expressed and highly abundant protein (2). HMGB2 is widely expressed during embryonic development, but it is restricted to lymphoid organs and testis in adult animals (3). HMGB3 is only expressed during embryogenesis (4). While expression varies, the biochemical properties of the different family members may be indistinguishable. The HMG box domains facilitate the binding of HMGB proteins to the minor groove of DNA, which results in local bending of the DNA double helix (1,2). HMGB proteins are recruited by and help facilitate the assembly of site-specific DNA binding proteins to their cognate binding sites in chromatin. For example, HMGB1 and HMGB2 facilitate the binding of Hox proteins, Oct proteins, p53, Rel proteins, and steroid hormone receptor proteins to their target gene promoters (1,2). Furthermore, HMGB2 interacts with RAG1 to facilitate RAG complex binding to the recombinant signal sequence (RSS) and stimulate DNA-bending and subsequent VDJ cleavage at antigen receptor genes (5,6). In addition to their functions in the nucleus, HMGB proteins play a significant role in extracellular signaling associated with inflammation. HMGB2 is secreted by myeloid cells and promotes proliferation and migration of endothelial cells by binding to the receptor for advanced glycation endproducts (RAGE) (7). Research studies have shown that HMGB2 overexpression in hepatocellular carcinoma is associated with poor prognosis and shorter survival time (8).

**Background References**

1. Thomas, J.O. and Travers, A.A. (2001) *Trends Biochem Sci* 26, 167-74.
2. Müller, S. et al. (2004) *J Intern Med* 255, 332-43.
3. Ronfani, L. et al. (2001) *Development* 128, 1265-73.
4. Vaccari, T. et al. (1998) *Genomics* 49, 247-52.
5. Zhang, M. and Swanson, P.C. (2009) *BMC Mol Biol* 10, 24.
6. Aidinis, V. et al. (1999) *Mol Cell Biol* 19, 6532-42.
7. Pusterla, T. et al. (2009) *Autoimmunity* 42, 308-10.
8. Kwon, J.H. et al. (2010) *Clin Cancer Res* 16, 5511-21.

**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

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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