HMGB1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	HMGB1, Polyclonal Antibody
Full Product Name	HMGB1 Rabbit pAb
Product Gene Name	anti-HMGB1 antibody
Product Synonym Names	HMG1; HMG3; HMG-1; SBP-1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	PBS with 0.02% Sodium Azide, 50% Glycerol, pH 7.3.
Purity/Purification	Affinity Purified
Preparation and Storage	Store at -20 degree C. Avoid freeze/thaw cycles.
Molecular Weight	29kDa
OMIM	163905
3D Structure	ModBase 3D Structure for P09429
Immunogen	A synthetic peptide corresponding to a sequence within amino acids 100-200 of human HMGB1 (NP_002119.1).
Cellular Localization	Cell Membrane, Chromosome, Cytoplasm, Endosome, Membrane, Nucleus, Secreted
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-HMGB1 antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunofluorescence (IF)
Application Notes for anti-HMGB1 antibody	WB: 1:500-1:2000 IHC: 1:50-1:200 IF: 1:50-1:200
Related Product Information for anti-HMGB1 antibody	Multifunctional redox sensitive protein with various roles in different cellular compartments. In the nucleus is one of the major chromatin-associated non-histone proteins and acts as a DNA chaperone involved in replication, transcription, chromatin remodeling, V(D)J recombination, DNA repair and genome stability. Proposed to be an universal biosensor for nucleic acids. Promotes host inflammatory response to sterile and infectious signals and is involved in the coordination and integration of innate and adaptive immune responses. In the cytoplasm functions as sensor and/or chaperone for immunogenic nucleic acids implicating the activation of TLR9-mediated immune responses, and mediates autophagy. Acts as danger associated molecular pattern (DAMP) molecule that amplifies immune responses during tissue injury (PubMed:27362237). Released to the extracellular environment can bind DNA, nucleosomes, IL-1 beta, CXCL12, AGER isoform 2/sRAGE, lipopolysaccharide (LPS) and lipoteichoic acid (LTA), and activates cells through engagement of multiple surface receptors. In the extracellular compartment fully reduced HMGB1 (released by necrosis) acts as a chemokine, disulfide HMGB1 (actively secreted) as a cytokine, and sulfonyl HMGB1 (released from apoptotic cells) promotes immunological tolerance (PubMed:23519706, PubMed:23446148, PubMed:23994764, PubMed:25048472). Has proangiogdenic activity. May be involved in platelet activation. Binds to phosphatidylserine and phosphatidylethanolamide. Bound to RAGE mediates signaling for neuronal outgrowth. May play a role in accumulation of expanded polyglutamine (polyQ) proteins such as huntingtin (HTT) or TBP (PubMed:23303669, PubMed:25549101).

Other Notes	Small volumes of anti-HMGB1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for HMGB1 purchase	MBS8544984 is an antibody targeting HMGB1. Also known as HMGB1 Rabbit pAb. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HMGB1. It may not necessarily be applicable to this product.

NCBI GI #	4504425
NCBI GeneID	3146
NCBI Accession #	NP_002119.1
UniProt Primary Accession #	P09429
UniProt Related Accession #	P09429
GenBank Nucleotide #	NP_002119.1
NCBI Official Full Name	high mobility group protein B1 isoform 1
NCBI Official Synonym Full Names	high mobility group box 1
NCBI Official Symbol	HMGB1
NCBI Official Synonym Symbols	HMG1; HMG3; HMG-1; SBP-1
UniProt Protein Name	High mobility group protein B1
UniProt Synonym Protein Names	High mobility group protein 1
Protein Family	High mobility group B protein
UniProt Gene Name	HMGB1
UniProt Synonym Gene Names	HMG1; HMG-1
UniProt Entry Name	HMGB1_HUMAN
NCBI Protein Information	high mobility group protein B1
NCBI Summary for HMGB1	This gene encodes a protein that belongs to the High Mobility Group-box superfamily. The encoded non-histone, nuclear DNA-binding protein regulates transcription, and is involved in organization of DNA. This protein plays a role in several cellular processes, including inflammation, cell differentiation and tumor cell migration. Multiple pseudogenes of this gene have been identified. Alternative splicing results in multiple transcript variants that encode the same protein. [provided by RefSeq, Sep 2015]

UniProt Comments for HMGB1	HMGB1: DNA binding proteins that associates with chromatin and has the ability to bend DNA. Binds preferentially single-stranded DNA. Involved in V(D)J recombination by acting as a cofactor of the RAG complex. Acts by stimulating cleavage and RAG protein binding at the 23 bp spacer of conserved recombination signal sequences (RSS). Heparin-binding protein that has a role in the extension of neurite-type cytoplasmic processes in developing cells. Component of the RAG complex composed of core components RAG1 and RAG2, and associated component HMGB1 or HMGB2. Belongs to the HMGB family. Protein type: DNA repair, damage; Nuclear receptor co-regulator Chromosomal Location of Human Ortholog: 13q12 Cellular Component: nucleoplasm; extracellular space; cell surface; transcriptional repressor complex; extracellular region; condensed chromosome; nucleus Molecular Function: protein binding; RAGE receptor binding; double-stranded DNA binding; damaged DNA binding; cytokine activity; chromatin binding; transcription factor activity; DNA bending activity; transcription factor binding; single-stranded DNA binding; chemoattractant activity Biological Process: negative regulation of transcriptional preinitiation complex assembly; DNA topological change; V(D)J recombination; apoptosis; positive regulation of apoptosis; positive regulation of caspase activity; base-excision repair, DNA ligation; negative regulation of transcription from RNA polymerase II promoter; DNA recombination; chromatin remodeling; regulation of transcription from RNA polymerase II promoter; myeloid dendritic cell activation; inflammatory response to antigenic stimulus; positive chemotaxis; dendritic cell chemotaxis; innate immune response; DNA ligation during DNA repair; positive regulation of transcription from RNA polymerase II promoter; DNA fragmentation during apoptosis; neurite development; cell structure disassembly during apoptosis; positive regulation of DNA binding
Research Articles on HMGB1	**1.** High HMGB1 and low Hsp70 were associated with poor prognosis in patients with acute pancreatitis. Hsp70 might play a protective role in acute pancreatitis.
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