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HMGB1 Antibody (C-term) (Ascites)

Mouse Monoclonal Antibody (Mab)
Catalog # AM1991a

Specification

HMGB1 Antibody (C-term) (Ascites) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P09429
Other Accession	P63159, P12682, P63158, Q4R844, P07156, P10103, NP_002119.1, Q08IE6
Reactivity	**Human, Mouse**
Predicted	**Bovine, Hamster, Horse, Monkey, Pig, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgM**
Calculated MW	**24894**
Antigen Region	**152-180**

HMGB1 Antibody (C-term) (Ascites) - Additional Information

Gene ID 3146

Other Names
High mobility group protein B1, High mobility group protein 1, HMG-1, HMGB1, HMG1

Target/Specificity
This HMGB1 antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 152-180 amino acids from the C-terminal region of human HMGB1.

Dilution
WB~~1:500~1600
IHC-P~~1:10~50

Format
Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
HMGB1 Antibody (C-term) (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

HMGB1 Antibody (C-term) (Ascites) - Protein Information

Name HMGB1 (HGNC:4983)

Synonyms HMG1

Function 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 (PubMed:33147444). 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 a sensor and/or chaperone for immunogenic nucleic acids implicating the activation of TLR9-mediated immune responses, and mediates autophagy. Acts as a 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 (PubMed:34743181). 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 (By similarity). May be involved in platelet activation (By similarity). Binds to phosphatidylserine and phosphatidylethanolamide (By similarity). Bound to RAGE mediates signaling for neuronal outgrowth (By similarity). May play a role in accumulation of expanded polyglutamine (polyQ) proteins such as huntingtin (HTT) or TBP (PubMed:23303669, PubMed:25549101).

Cellular Location
Nucleus. Chromosome {ECO:0000250|UniProtKB:P10103, ECO:0000250|UniProtKB:P63159, ECO:0000305}. Cytoplasm. Secreted {ECO:0000250|UniProtKB:P63158, ECO:0000269|PubMed:12231511, ECO:0000269|PubMed:14532127, ECO:0000269|PubMed:15944249, ECO:0000269|PubMed:19811284, ECO:0000269|PubMed:22869893, ECO:0000269|PubMed:33147444}. Cell membrane {ECO:0000250|UniProtKB:P63158, ECO:0000250|UniProtKB:P63159, ECO:0000269|PubMed:11154118}; Peripheral membrane protein {ECO:0000250|UniProtKB:P63158, ECO:0000250|UniProtKB:P63159, ECO:0000269|PubMed:11154118}; Extracellular side {ECO:0000250|UniProtKB:P63158, ECO:0000250|UniProtKB:P63159, ECO:0000269|PubMed:11154118}. Endosome {ECO:0000250|UniProtKB:P63158} Endoplasmic reticulum-Golgi intermediate compartment {ECO:0000250|UniProtKB:P63158}. Note=In basal state predominantly nuclear. Shuttles between the cytoplasm and the nucleus (PubMed:12231511, PubMed:17114460). Translocates from the nucleus to the cytoplasm upon autophagy stimulation (PubMed:20819940). Release from macrophages in the extracellular milieu requires the activation of NLRC4 or NLRP3 inflammasomes (By similarity). Passively released to the extracellular milieu from necrotic cells by diffusion, involving the fully reduced HGMB1 which subsequently gets oxidized (PubMed:19811284) Also released from apoptotic cells (PubMed:16855214, PubMed:18631454) Active secretion from a variety of immune and non-immune cells such as macrophages, monocytes, neutrophils, dendritic cells and natural killer cells in response to various stimuli such as LPS and cytokines involves a nonconventional secretory process via secretory lysosomes (PubMed:12231511, PubMed:14532127, PubMed:15944249). Secreted by plasma cells in response to LPS (By similarity). Found on the surface of activated platelets (PubMed:11154118). An increased chromatin association is observed when associated with the adenovirus protein pVII (PubMed:27362237). {ECO:0000250|UniProtKB:P63158, ECO:0000269|PubMed:11154118, ECO:0000269|PubMed:12231511, ECO:0000269|PubMed:14532127, ECO:0000269|PubMed:15944249, ECO:0000269|PubMed:16855214, ECO:0000269|PubMed:17114460, ECO:0000269|PubMed:18631454, ECO:0000269|PubMed:19811284, ECO:0000269|PubMed:20819940, ECO:0000269|PubMed:27362237, ECO:0000305|PubMed:20123072}

Tissue Location
Ubiquitous. Expressed in platelets (PubMed:11154118).

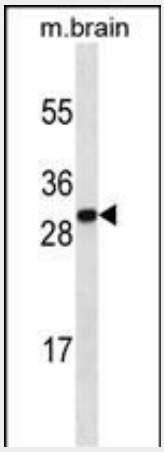
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HMGB1 Antibody (C-term) (Ascites) - Protocols

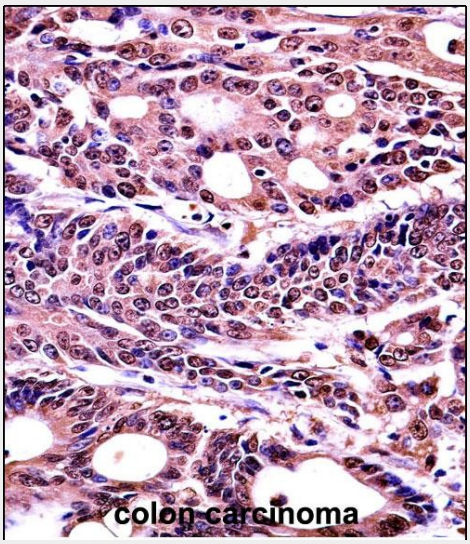
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HMGB1 Antibody (C-term) (Ascites) - Images



HMGB1 Antibody (C-term) (Cat. #AM1991a) western blot analysis in mouse brain tissue lysates (35µg/lane).This demonstrates the HMGB1 antibody detected the HMGB1 protein (arrow).



HMGB1 Antibody (C-term) (Ascites) (AM1991a)immunohistochemistry analysis in formalin fixed and paraffin embedded human colon carcinoma followed by peroxidase conjµgation of the secondary antibody and DAB staining.This data demonstrates the use of HMGB1 Antibody (C-term) (Ascites) for immunohistochemistry. Clinical relevance has not been evaluated.

HMGB1 Antibody (C-term) (Ascites) - Background

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 (By similarity).

HMGB1 Antibody (C-term) (Ascites) - References

Yujiri, T., et al. Eur. J. Haematol. 85(4):366-367(2010) Tang, D., et al. Oncogene 29(38):5299-5310(2010) He, X.C., et al. Zhonghua Gan Zang Bing Za Zhi 18(5):361-365(2010) Bao, G., et al. World J Surg Oncol 8 (1), 52 (2010) : Naumnik, W., et al. Folia Histochem. Cytobiol. 47(4):703-709(2009)