

HMG-1 Polyclonal Antibody

Catalog # AP73685

Specification

HMG-1 Polyclonal Antibody - Product Information

| | |
|-------------------|--------------------------|
| Application | IF |
| Primary Accession | P09429 |
| Reactivity | Human, Mouse, Rat |
| Host | Rabbit |
| Clonality | Polyclonal |

HMG-1 Polyclonal Antibody - Additional Information

Gene ID 3146

Other Names

HMGB1; HMG1; High mobility group protein B1; High mobility group protein 1; HMG-1

Dilution

IF~IF: 1:50-200 Western Blot: 1/500 - 1/2000. IHC-p: 1/100-1/300. ELISA: 1/20000. Not yet tested in other applications.

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Storage Conditions

-20°C

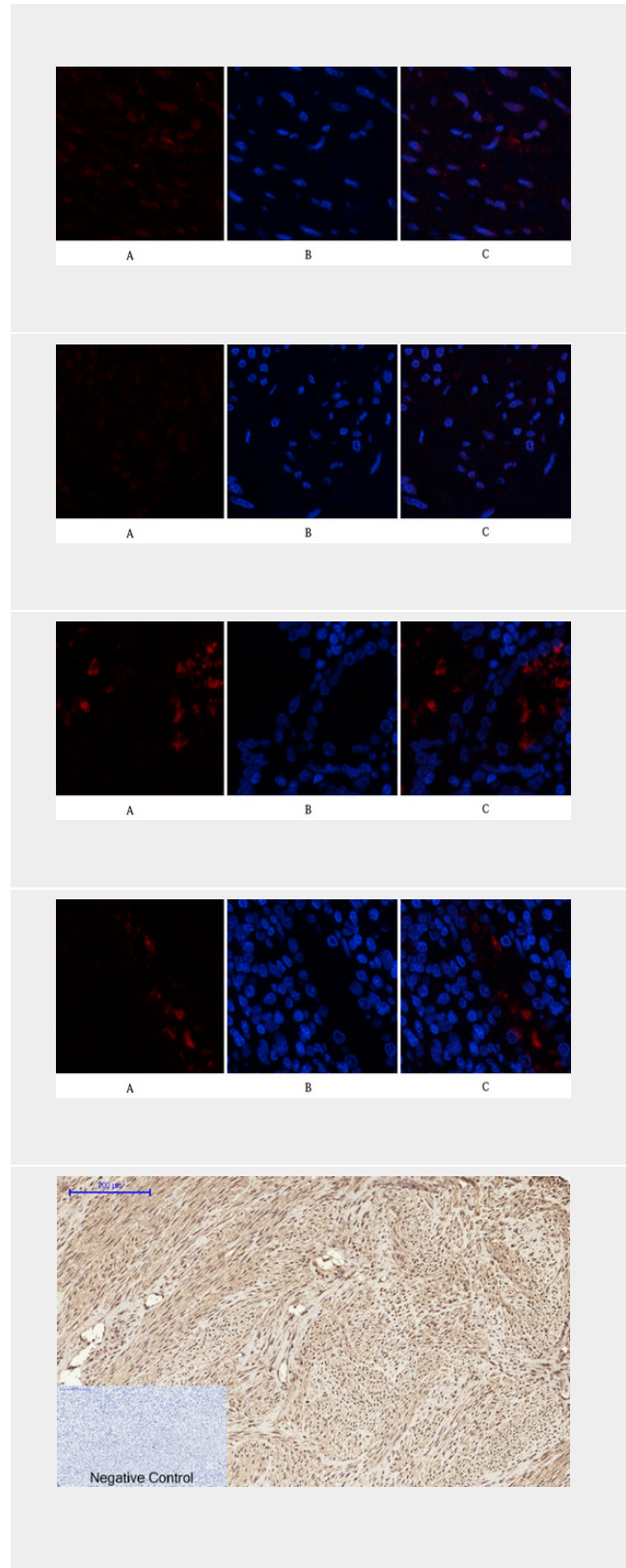
HMG-1 Polyclonal Antibody - Protein Information

Name HMGB1

Synonyms HMG1

Function

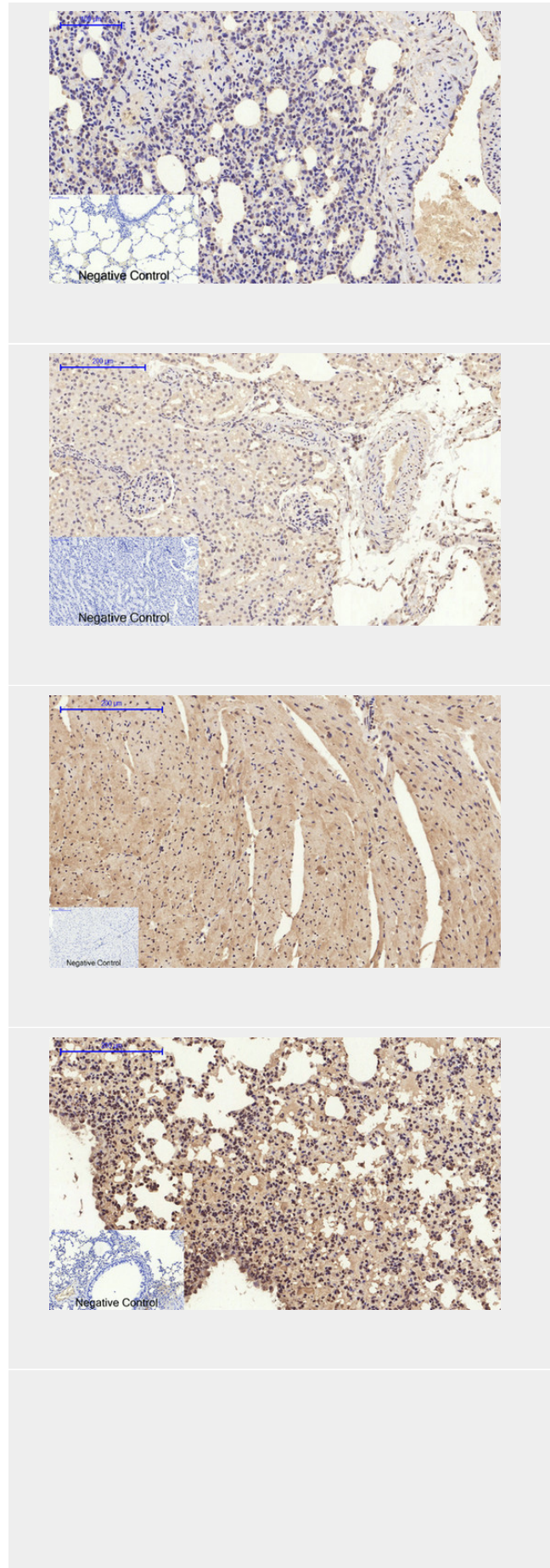
Multifunctional redox sensitive protein with various roles in different cellular compartments. In the nucleus is one of the major chromatin-associated non-histone proteins and acts as a DNA chaperone involved in replication, transcription, chromatin remodeling, V(D)J recombination, DNA repair and genome stability (Ref.71). Proposed to be an universal biosensor for nucleic acids. Promotes host inflammatory



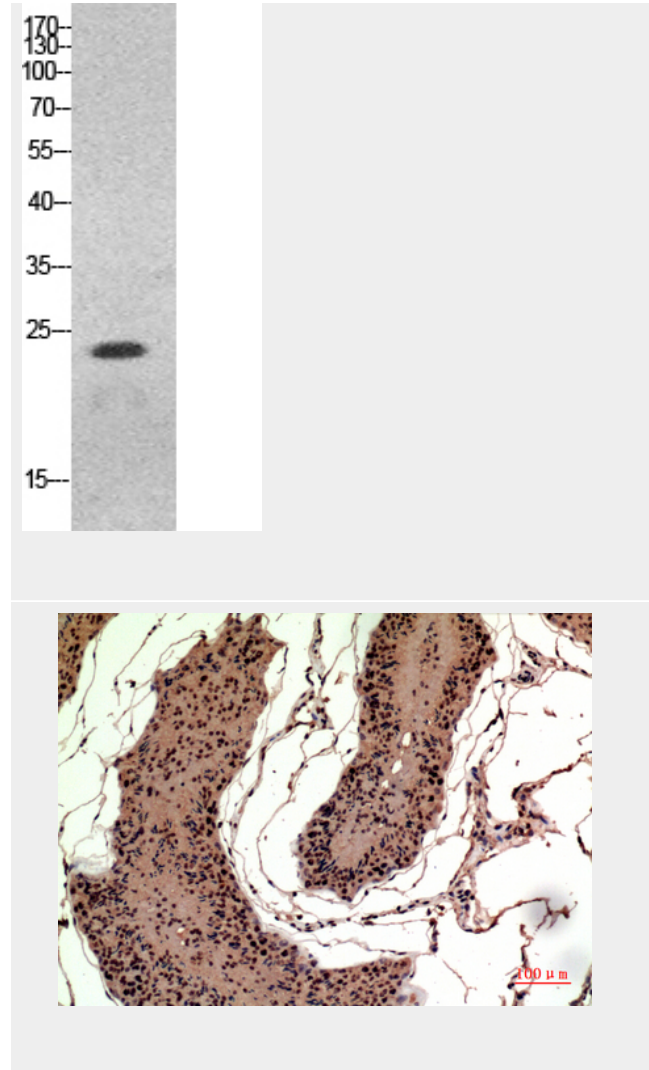
response to sterile and infectious signals and is involved in the coordination and integration of innate and adaptive immune responses. In the cytoplasm functions as sensor and/or chaperone for immunogenic nucleic acids implicating the activation of TLR9-mediated immune responses, and mediates autophagy. 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 proangiogenic 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 {ECO:0000269|PubMed:12231511, ECO:0000269|PubMed:17114460, ECO:0000269|PubMed:20819940, ECO:0000269|PubMed:22869893,



ECO:0000269|PubMed:27362237,
ECO:0000269|PubMed:29618516,
ECO:0000269|Ref.71}. Chromosome
{ECO:0000250|UniProtKB:P10103,
ECO:0000250|UniProtKB:P63159,
ECO:0000305}. Cytoplasm
{ECO:0000269|PubMed:11154118,
ECO:0000269|PubMed:12231511,
ECO:0000269|PubMed:17114460,
ECO:0000269|PubMed:20819940,
ECO:0000269|PubMed:22869893,
ECO:0000269|PubMed:29618516,
ECO:0000269|Ref.71}. 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|Ref.71}. 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



HMG-1 Polyclonal Antibody - Background

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

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).

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 proangiogenic 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).

HMG-1 Polyclonal Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)