

## HMGB1 Ab

Cat.#: DF7008  
Size: 100ul,200ul

Concn.: 1mg/ml  
Source: Rabbit

Mol.Wt.: 25kDa  
Clonality: Polyclonal

Application: WB 1:500-1:2000 IHC 1:50-1:200, IF/ICC 1:100-1:500

Reactivity: Human,Mouse,Rat

Purification: The antiserum was purified by peptide affinity chromatography using SulfoLink™ Coupling Resin (Thermo Fisher Scientific).

Specificity: HMGB1 Ab detects endogenous levels of total HMGB1.

Immunogen: A synthesized peptide derived from human HMGB1.

Uniprot: P09429

Description: High mobility group protein B1 (HMGB1) 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 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 facilitates the binding of Hox proteins, Oct-1, p53, Rel proteins, and steroid hormone receptor proteins to their target gene promoters (1,2). In addition to their functions in the nucleus, HMGB proteins play a significant role in extracellular signaling associated with inflammation (5,6). HMGB1 is massively released into the extracellular environment during cell necrosis, but not apoptosis. Extracellular HMGB1 alarms the innate immune system by acting as a chemoattractant for inflammatory leukocytes, smooth muscle cells, and stem cells, functioning as an immune adjuvant for soluble and particulate antigens, and triggering activation of T cells and dendritic cells. In addition, activated monocytes, macrophages and, dendritic cells also secrete HMGB1, forming a positive feedback loop that results in the release of additional cytokines and neutrophils. Hypoxia has also been shown to cause the release of HMGB1

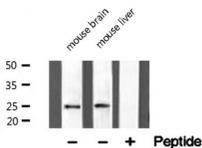
in the liver, and some studies suggest a role for extracellular HMGB1 in tumor homeostasis (5,6).

**Subcellular Location:** Nucleus. Chromosome. Cytoplasm. Secreted. Cell membrane. Endosome. Endoplasmic reticulum-Golgi intermediate compartment. 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 apoptic 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).

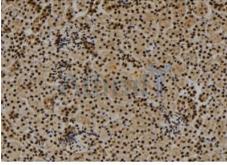
**Tissue Specificity:** Ubiquitous. Expressed in platelets (PubMed:11154118).

**Similarity:** HMG box 2 mediates proinflammatory cytokine-stimulating activity and binding to TLR4 (PubMed:12765338, PubMed:20547845). However, not involved in mediating immunogenic activity in the context of apoptosis-induced immune tolerance (PubMed:24474694).The acidic C-terminal domain forms a flexible structure which can reversibly interact intramolecularly with the HMG boxes and modulate binding to DNA and other proteins (PubMed:23063560).Belongs to the HMGB family.

**Storage Condition and Buffer:** Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.Store at -20 °C.Stable for 12 months from date of receipt.



Western blot analysis of extracts from various tissue sample,using HMGB1 Ab .



DF7008 at 1/100 staining Mouse kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the Ab for 1.5 hours at 22°C. An HRP conjugated goat anti-rabbit Ab was used as the secondary.



DF7008 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25°C. The primary Ab was diluted at 1/200 and incubated with the sample for 1 hour at 37°C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary Ab.



DF7008 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25°C. The primary Ab was diluted at 1/200 and incubated with the sample for 1 hour at 37°C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary Ab.

**IMPORTANT:** For western blot, incubate membrane with diluted primary Ab in 5% w/v milk, 1X TBS, 0.1% Tween@20 at 4°C with gentle shaking, overnight.

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