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HMGB1

Reactivity: Human

Tested applications:WB FC

Recommended Dilution:WB 1:500 - 1:2000 FC 1:20 - 1:50

Calculated MW:25kDa

Observed MW: Refer to Figures

Immunogen:

A synthetic peptide of human HMGB1

Storage Buffer:

Store at 4. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

befj

Synonym:

HMGB1;DKFZp686A04236;HMG1;HMG3;SBP-1 ;

Catalog #:A0718

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID:3146

Isotype: IgG

Swiss Prot:P09429

Purity: Affinity purification

For research use only.

Background:

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).

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