

# Recombinant Human/Mouse/Rat HMGB1 Box1 Protein

## RPCB0029



### Product Information

<b>Product SKU:</b>	RPCB0029	<b>Gene ID:</b>	3146/15289/25459	<b>Size:</b>	10µg
<b>Tag:</b>	No tag	<b>Reactivity:</b>	Human,Mouse,Rat		

### Additional Information

<b>Expression Host:</b>	HEK293 cells	<b>Swissprot:</b>	P09429/P63158/P63159
<b>Purity:</b>	> 95% by SDS-PAGE.		

### Protein Information

**Background:** High-mobility group box 1 protein (HMGB1), also known as HMG-1 or amphoterin previously, is a member of the HMGB family consisting of three members, HMGB1, HMGB2, and HMGB3. HMGB1 is a DNA-binding nuclear protein, released actively following cytokine stimulation as well as passively during cell death. It is the prototypic damage-associated molecular pattern (DAMP) molecule and has been implicated in several inflammatory disorders. HMGB1 signals via the receptor for advanced glycation end-product (RAGE) and members of the toll-like receptor (TLR) family. The most prominent HMGB1 protein and mRNA expression arthritis are present in pannus regions, where synovial tissue invades articular cartilage and bone. HMGB1 promotes the activity of proteolytic enzymes, and osteoclasts need HMGB1 for functional maturation. As a non-histone nuclear protein, HMGB1 has a dual function. Inside the cell, HMGB1 binds DNA, regulating transcription, and determining chromosomal architecture. Outside the cell, HMGB1 can serve as an alarmin to activate the innate system and mediate a wide range of physiological and pathological responses. Extracellular HMGB1 represents an optimal "necrotic marker" selected by the innate immune system to recognize tissue damage and initiate reparative responses. However, extracellular HMGB1 also acts as a potent pro-inflammatory cytokine that contributes to the pathogenesis of diverse inflammatory and infectious disorders. HMGB1 has been successfully therapeutically targeted in

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multiple preclinical models of infectious and sterile diseases including arthritis. As shown in studies on patients as well as animal models, HMGB1 can play an important role in the pathogenesis of the rheumatic disease, including rheumatoid arthritis, systemic lupus erythematosus, and polymyositis among others. Besides, enhanced postmyocardial infarction remodeling in type 1 diabetes mellitus was partially mediated by HMGB1 activation.

**Protein Description:** High quality, high purity and low endotoxin recombinant Recombinant Human/Mouse/Rat HMGB1 Box1 Protein , tested reactivity in E.coli and has been validated in SDS-PAGE.100% guaranteed.

**Endotoxin:** < 1.0 EU/μg of the protein by LAL method.

**Formulation:** Lyophilized from a 0.22 μm filtered solution of 50 mM HEPES, 500 mM NaCl, 0.5 mM DTT, pH 7.9. Contact us for customized product form or formulation.

**Storage:** Store at -20°C.Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.