

## Active Native Bovine HMGB1

**Cat. No.** HMGB1-8447B    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Product Overview</b> | Native Bovine HMGB1 was purified from Calf Thymus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Species</b>          | Calf                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>           | Calf Thymus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Description</b>      | <p>High mobility group 1 (HMG1) is a 26 kDa highly conserved non-sequence-specific DNA-binding nuclear protein. Mammalian HMG1 has two homologous DNA-binding domains HMG boxes, A and B (each of 80–90 amino-acid residues), linked by a short basic region to an acidic C-terminal domain containing 30 consecutive Asp and Glu residues. HMG1 has been implicated in a number of fundamental biological processes including transcription, replication and recombination, in which it plays a role in manipulating DNA structure by bending, looping, compaction or unwinding, or by directly contacting with distinct cellular proteins. HMG-1 can act as a repressor, by interacting with TBP to block pre-initiation complex formation or as an activator, by facilitating the binding of various transcription factors to their cognate DNA sequences. Most recently, it was discovered that HMG-1 is a late mediator of delayed endotoxin lethality by activating downstream cytokine release.</p> |
| <b>Form</b>             | 20 mM Tris-Cl, pH 7.9, 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Bio-activity</b>     | 1 unit equals 1 ng of purified protein. 10-100 units are required for a gel mobility shift assay in a 20µl reaction to super-shift TBP-DNA complex, 50-500 units are required for a reconstituted transcription assay and 100 units are sufficient for a protein-protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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interaction assay.

**AA Sequence**

MGKGDPKKPR GKMSYAFFV QTCREEHKKK HPDASVNFSE FSKKCSERWK  
 TMSAKEKGKF EDMAKADKAR YEREMKTYIP PKGETKKKFK DPNAPKRPPS  
 AFFLFCSEYR PKIKGEHPGL SIGDVAKKLG EMWNNTAADD KQPYEKKA  
 LKEKYEKIDIA AYRAKGKPD AAKGVVKA EKSKKKKEEEED EDEEDEEE  
 EDEEDEEEEEE DDDDE

**Purity** >95% as determined by SDS-PAGE

**Storage** -80 °C

**Concentration** 900 µg/ml

**Shipping** Dry Ice

## GENE INFORMATION

**Gene Name** HMGB1 high mobility group box 1 [ Bos taurus ]

**Official Symbol** HMGB1

**Synonyms** HMGB1; high mobility group box 1; high mobility group protein B1; HMG-1; high mobility group protein 1

**Gene ID** 282691

**mRNA Refseq** NM\_176612

**Protein Refseq** NP\_788785

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|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UniProt ID</b>          | 10103                                                                                                                                                          |
| <b>Chromosome Location</b> | chromosome: 12                                                                                                                                                 |
| <b>Pathway</b>             | Androgen Receptor Signaling Pathway, organism-specific biosystem; Base excision repair, organism-specific biosystem; Base excision repair, conserved biosystem |
| <b>Function</b>            | DNA binding, bending; chemoattractant activity; damaged DNA binding; double-stranded DNA binding                                                               |

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