
Product Data Sheet

Product Name: HMGB1 Human, Hi-5
 Cat. No.: GP23658
 Batch No.: 1

Product Data

Purity	>98%	Source	Hi-5 Insect Cells.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	HMG1; HMG3; SBP-1; Amphoterin; HMGB1; High-Mobility Group Box 1.		
Amino Acid Sequence	MGKGDPPKKPR GKMSYAFFV QTCREEHKKK HPDASVNFSE FSKKCSERWK TMSAKEKGKF EDMAKADKAR YEREMKTYIP PKGETKKKFK DPNAPKRPPS AFFLFCSEYR PKIKGEHPGL SIGDVAKKLG EMWNNTAADD KQPYEKKA LKEYEKDIA AYRAKGPDA AKKGVVKA EKSKKKKEEEED EDEEDEEEEE EDEEDEEEEE DDDDELEHHH HHH.		
Formulation	The HMG1 solution (1mg/ml) contains 20mM Tris-HCl pH-8, 1mM EDTA, 0.5mM DTT and 10% glycerol.		

Introduction

HMGB1 is an abundant chromatin-binding protein found in eukaryotic cell nucleus and acts in the assembly of nucleoprotein complexes. Inside the cell, HMGB1 binds to DNA and is involved in transcriptional regulation. Outside the cell, HMGB1 acts as a cytokine with activities that resemble those of tumor necrosis factor (TNF). HMGB1 is elevated significantly in chronic kidney disease patients and correlates with glomerular filtration rate as well as with markers of inflammation and malnutrition. HMGB1 is involved in Gram-negative sepsis by catalyzing movement of LPS monomers from LPS aggregates to CD14 to initiate a TLR4-mediated proinflammatory response. HMGB1 plays an important role in the relationship between necrosis and malignancy in glioma tumours. HMG1 protein is induced by Mycobacterium bovis BCG. Overexpression of HMGB1 is common in gastrointestinal stromal tumors and is related to the KIT mutation. HMG1 induces growth inhibition and apoptosis in macrophages through RAGE intracellular signaling pathway. The increase of extracellular HMGB1 observed in salivary glands of Sjogren's syndrome patients indicates that HMGB-1 is involved in the inflammatory process of the disease. HMGB-1 together with estrogen increase cell cycle progression in tumor cell lines.

Caution: Product has not been fully validated for medical applications. For research use only.

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Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

HMG1 Human Recombinant fused to an 8 aa His-Tag at C-terminus produced in High Five insect cells is a single, glycosylated, polypeptide chain (amino acids 1-215) containing 223 amino acids and having a molecular mass of 25 kDa. The HMGB1 is purified by proprietary chromatographic techniques.

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