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High-Mobility Group Box 1 Human Recombinant, Hi-5 RECOMBINANT PROTEIN

Catalog Number: PRP-610
Quantity: 5 micrograms, 20 micrograms, 1 milligram
Format: Sterile-filtered colorless solution
Host: *Baculovirus*

Background:

High-mobility group box 1 protein (HMGB1), previously known as HMG-1 or amphoterin, is a member of the high mobility group box family of non-histone chromosomal proteins. Human HMGB1 is expressed as a 30 kDa, 215 amino acid (aa) single chain polypeptide containing three domains: two N-terminal globular, 70 aa positively charged DNA-binding domains (HMG boxes A and B), and a negatively charged 30 aa C-terminal region that contains only Asp and Glu. Residues 27-43 and 178-184 both contain a NLS. Posttranslational modifications of the molecule have been reported, with acetylation occurring on as many as 17 lysine residues. HMGB1 is expressed at high levels in almost all cells. It was originally discovered as a nuclear protein that could bend DNA. Such bending stabilizes nucleosome formation and regulates the expression of select genes upon recruitment by DNA binding proteins.

Specificity and Preparation:

High-mobility group box 1 (HMGB1 or HMG1) human recombinant fused to His-Tag produced in High Five insect cells is a single, glycosylated, polypeptide chain containing 223 amino acids and having a molecular mass of 25 kDa. The HMGB1 is purified by proprietary chromatographic techniques. Purity is greater than 90% as determined by SDS-PAGE. The HMG1 solution (1 mg/ml) contains 20 mM Tris pH-8, 1 mM EDTA, 0.5 mM DTT and 10% glycerol.

Amino acid sequence:

MGKGDPPKPR GKMSSYAFFV QTCREEHKKK HPDASVNFSE FSKKCSERWK TMSAKEKGGKF
EDMAKADKAR YEREMKTYIP KGETKKKFK DPNAPKRPPS AFFLFCSEYR PKIKGEHPGL
SIGDVAKKLG EMWNNTAADD KQPYEKKA AK LKEKYEKDIA AYRAKGGKPD AAKKGVVKA EK
SKKKKEEEEE EDEEDEEEEE EDEEDEDEEEE DDDDELEHHH HHH

Usage and Storage:

Although stable at 4°C for 4 weeks, material should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid repeated freezing and thawing. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

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