
Mouse HMGB1 Recombinant Protein Carrier-Free

Catalog Number: 34-8401

Also known as: high mobility group box 1

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Mouse HMGB1 Recombinant Protein Carrier-Free

REF **Catalog Number:** 34-8401

Concentration: 0.5 mg/mL

Handling Conditions: For best recovery, quick-spin vial prior to opening. Use in sterile environment.

Source: E. coli expressed amino acids Met1-Glu215 of mouse HMGB-1 accession # NM_010439

Molecular Mass: The protein has a predicted molecular mass of 24,893. The reduced protein migrates as a 30 kDa polypeptide on SDS-PAGE. The non-reduced protein migrates as a 30 kDa polypeptide.

Purity: > 98%, as determined by SDS-PAGE

Endotoxin: Less than 0.01 ng/ug cytokine as determined by the LAL assay.

Bioactivity: The ED₅₀ of this protein, as measured by mouse TNF alpha induction in RAW264.7 cells, is 3-25 ug/mL in the presence of 10 ug/mL Polymyxin B. This corresponds to a specific activity of 3,300-40 Units/mg.

Formulation: Sterile liquid; 20 mM Tris-HCl, pH 8.0, 0.2 M NaCl, 1 mM TCEP. 0.22 um filtered.

Temperature Limitation: Store at less than or equal to -70°C.

Batch Code: Refer to vial

Use By: Refer to vial



Description

High-mobility group box-1 (HMGB1) protein was originally described as a nuclear non-histone DNA binding chromosomal protein. However, recent studies indicate that damaged, necrotic cells liberate HMGB1 into the extracellular milieu where it functions as a proinflammatory cytokine. Mouse HMGB1 is expressed as a 215 amino acid single chain polypeptide containing three domains: two tandem-linked positively charged DNA-binding domains (HMG box A, aa 9-79; and box B, aa 89-162), and a negatively charged 30 aa C-terminal acidic tail region. Residues 28 - 44 and 180 - 185 contain a nuclear localization signal (NLS). The cytokine activity of HMGB1 is contained in the B box, while the A box is associated with the helix-loop-helix domain of transcription factors. HMGB1 acts both as an inflammatory mediator that promotes monocyte migration and cytokine secretion, as well as a mediator of T cell-dendritic cell interaction. HMGB1 is secreted and acts to transduce cellular signals through its high affinity receptor, RAGE and possibly, TLR2 and TLR4.

Applications Reported

Mouse HMGB1 Recombinant Protein Carrier-Free is biologically active.

Applications Tested

The ED₅₀ of this protein, as measured by mouse TNF alpha induction in RAW264.7 cells, is 3-25 ug/mL in the presence of 10 ug/mL Polymyxin B. This corresponds to a specific activity of 3,300-40 Units/mg.

References

Yang D, Chen Q, Yang H, Tracey KJ, Bustin M, Oppenheim JJ. High mobility group box-1 protein induces the migration and activation of human dendritic cells and acts as an alarmin. *J Leukoc Biol.* 2007, 81(1):59-66.

Related Products

00-4202 ELISA Diluent Solution (5X)

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18-4100 Avidin HRP

44-2404 Nunc MaxiSorp® flat-bottom 96 well plate

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