



Fully reduced-HMGB1, LPS-free

Product Number: *****
Expiration date: *****
Batch number: *****
Batch concentration: ***** mg/mL after addition of
 ***** μ L of distilled water.

Product Description:

HMGB1 is a 25 kDa nuclear protein, present in almost all mammalian cells. The protein is almost identical (213/215 aa) in human, mouse, rat. This product corresponds to the rat sequence and is produced in E.coli. Fully reduced-HMGB1 (complete notation: HMGB1C23hC45hC106h - Antoine J. *et al* (2014). Mol Med) forms complex with CXCL12 and has chemoattractant activity. It DOES NOT induce cytokine/chemokine secretion when given to target cells. The protein is free from LPS (<0.1EU/mL).

The product contains <0.006% v/v of Triton X-114 due to LPS removal procedure.

Reagent format:

Fully reduced-HMGB1 we provide is the natural protein, with no tags or additional amino acids.

The lyophilized protein once reconstituted will be dissolved in a solution containing 50 mM HEPES pH 7.9, 500 mM NaCl.

Storage: 2-8°C. The protein once resuspended can be stored frozen (-20°C).

Oxidation of cysteine 106 makes the protein inactive (Kazama *et al*, Immunity 2008; 29, 21-32).

To avoid cysteine oxidation DTT 0.5 mM is added during protein purification.

How to use product:

The product can be used in cell migration assays, both *in vitro* and *in vivo*; maximum activity is at 1 nM (Palumbo *et al*, 2004). Intraperitoneal injection in the mouse recruits neutrophils, monocytes and macrophages (Penzo *et al*, 2010).

This product is for research use only

References:

- Ronald H L Li *et al* Front Vet Sci. 2021 Lipopolysaccharide-Activated Canine Platelets Upregulate High Mobility Group Box-1 via Toll-Like Receptor PMID: 34235204
- Piao *et al* Nanoscale 2020 An 8-Hydroxy-Quinoline Derivative Protects Against Lipopolysaccharide-Induced Lethality in Endotoxemia by Inhibiting HMGB1-Mediated Caspase-11 Signaling. Frontiers in Pharmacology. PMID: 34093202.
- Chunxian Piao *et al* Nanoscale 2020 A RAGE-antagonist peptide potentiates polymeric micelle-mediated intracellular delivery of plasmid DNA for acute lung injury gene therapy. PMID: 32558842
- Agnieszka Irena Mazur-Bialy *et al* 2021 Antioxidants The Time-Course of Antioxidant Irisin Activity: Role of the Nrf2/HO-1/HMGB1 Axis PMID: 33440644

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MGKGDPPKPR  GKMSYAFFV  QTCREEHKKK
HPDASVNFSE  FSKKCSERWK TMSAKEKGF
EDMAKADKAR  YEREMKTYIP PKGETKKKFK
DPNAPKRPPS  AFFLFCSEYR PKIKGEHPGL
SIGDVAKKLG  EMWNTAADD  KQPYEKKA
LKEKYEKIDIA AYRAKGKPPA AKKGVVKA
SKKKKEEEDD  EEEDEDEEEE EEEDEDEEEE
DDDDE
  
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Fig. 1. Fully reduced-HMGB1 sequence

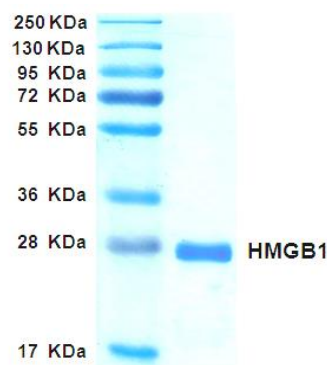


Fig. 2. SDS-PAGE with Coomassie Blue staining

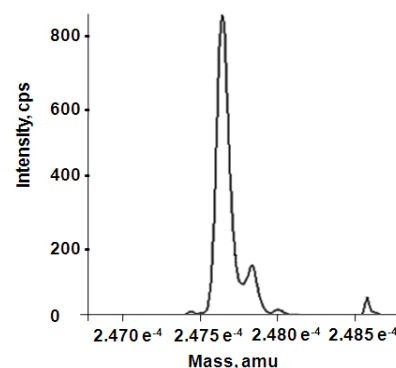


Fig. 3. Reconstructed molecular weight from MS

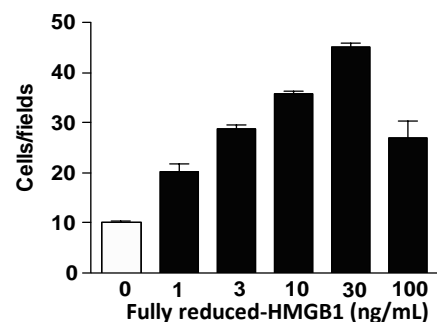


Fig. 4. Migration assay with 3T3 mouse cells