



## Disulfide-HMGB1, LPS-free

**Product Number:** HM-120;HM-121;HM-122;HM-123

**Expiration date:** (depends on batch)

**Batch number:** (each batch has a specific tracking number)

**Batch concentration:** (depends on batch) after addition of (depends on batch)  $\mu$ L of distilled water.

### **Product Description:**

Disulfide-HMGB1 can induce cytokine and chemokine production in monocytes and other inflammatory cells. This activity depends on a specific redox state of HMGB1 (Venereau et al,2012).

This product is produced in E.coli. It contains only trace amounts of LPS (<0.4 ng/mg protein), and is tested for the ability to stimulate cytokine production in human macrophages.

### **Reagent format:**

**The Disulfide-HMGB1 protein we provide is the natural protein, with no tags or additional amino acids.**

Disulfide-HMGB1 is lyophilized from 50 mM HEPES buffer, pH 7.9 and 500 mM NaCl.

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

### **How to use product:**

The product can be used as a pro-inflammatory mediator (Yang *et al*, 2012).

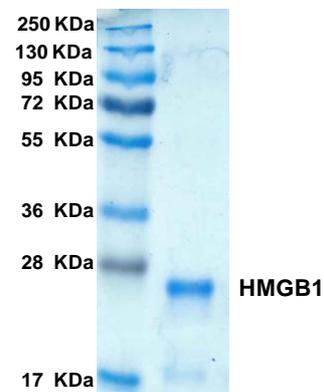
### **This product is for research use only**

### **References:**

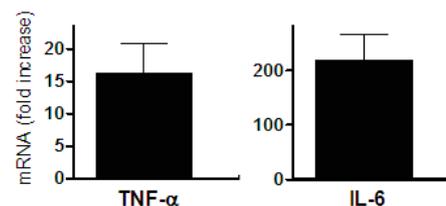
- Wang *et al* (1999) HMG-1 as a late mediator of endotoxin lethality in mice. *Science* 285:248-51
- Andersson *et al* (2000) High mobility group 1 protein (HMG-1) stimulates proinflammatory cytokine synthesis in human monocytes. *J Exp Med* 192:565-70
- Scaffidi *et al* (2002) Release of chromatin protein HMGB1 by necrotic cells triggers inflammation. *Nature* 418: 191-195
- Yang *et al* (2012) Redox modification of cysteine residues regulates the cytokine activity of HMGB1. *Mol Med* 2011 Nov 7. doi: 10.2119/molmed.2011.00389. [Epub ahead of print] PMID: 22105604

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MGKGDPPKPR  GKMSYAFFV  QTCREEHKKK
HPDASVNFSE  FSKKCSERWK TMSAKEKGF
EDMAKADKAR  YEREMKTYIP PKGETKKKFK
DPNAPKRPPS  AFFLFCSEYR PKIKGEHPGL
SIGDVAKGLG  EMWNNTAADD KQPYEKKAAC
LKEKYEKIDIA AYRAKGKPPA AKKGVVKAEC
SKKKKEEEDD  EEDEEDEEEE EEEDEDEEEE
DDDDDE
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**Fig. 1.** Disulfide-HMGB1 sequence



**Fig. 2.** SDS-PAGE with Coomassie Blue staining



**Fig. 3.** Disulfide-HMGB1 induces cytokine production. Human monocyte-derived macrophages were exposed to 10  $\mu$ g/ml HMGB1 for 4 hours at 37°C, and the levels of TNF- $\alpha$  and IL-6 mRNAs were measured by qPCR, relative to unexposed macrophages.