

## BoxA from HMGB1, human & mouse

### LPS-free

- Product Number:** HM-012, HM-013, HM-014  
**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) of distilled water.

### **Product Description:**

BoxA is one of the highly conserved DNA binding domains of HMGB1 protein. It consists of 89 amino acids and has a calculated molecular mass of approximately 10.4 kDa.

The sequence of BoxA is totally identical in human and mouse.

It contains only trace amounts of LPS (<0.4 ng/mg protein), and it is tested for the ability to inhibit the chemotactic activity of HMGB1 on fibroblasts.

### **Reagent format:**

**The BoxA we provide is produced in E.coli and has no tags or additional amino acids.**

The product is lyophilized from 50 mM HEPES-Na buffer, pH 7.9, 500 mM NaCl and 0.5 mM DTT.

**Storage:** 2-8°C. The protein once resuspended can be stored frozen (-20°C). The product is resistant to repeated freezing and thawing.

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

BoxA is an antagonist for HMGB1 and appears to inhibit all its activities, depending from all receptors.

Injection of 600 µg BoxA in the mouse protects against sepsis in a peritonitis model (Yang *et al* 2004) and from hepatitis in a mouse model of HBV infection (Sitia *et al* 2007).

BoxA (10 µg/mL) inhibits maturation, survival and Th1 differentiation of dendritic cells and T cell proliferation (Dumitriu *et al* 2005).

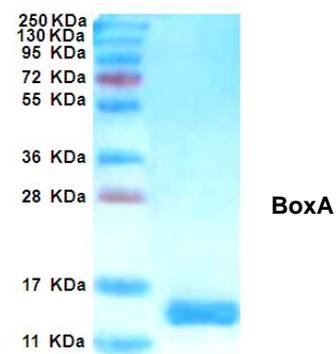
### **This product is for research use only**

#### **References:**

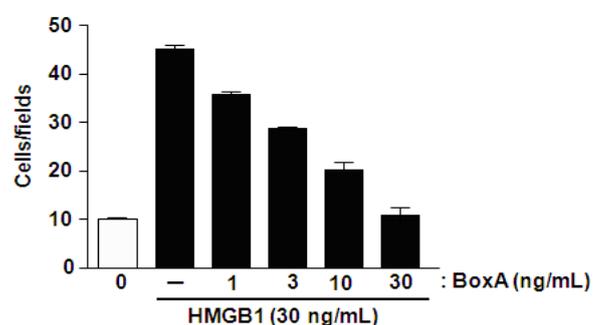
- Andrassy *et al* (2008) HMGB1 in ischemia-reperfusion injury of the heart. *Circulation* 117:3216-26  
 Dumitriu *et al* (2005) Release of HMGB1 by dendritic cells controls T cell activation via the receptor for advanced glycation endproducts (RAGE). *J Immunol* 174:7506-15  
 Maroso *et al* (2010) Toll-like receptor 4 and HMGB1 are involved in iktogenesis and can be targeted to reduce seizures. *Nature Medicine* 16:413-9  
 Muhammad *et al* (2008) The HMGB1 receptor RAGE mediates ischemic brain damage. *J Neurosci* 28:12023-31.  
 Sitia *et al* (2007) Treatment with HMGB1 inhibitors diminishes CTL-induced liver disease in HBV transgenic mice. *J Leukoc Biol* 81:100-7

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MGKGDPPKPR  GKMSYYAFFV  QTCREEHKKK
HPDASVNFSE  FSKKCSERWK  TMSAKEKGF
EDMAKADKAR  YEREMKTYIP  PKGETKKKF
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**Fig. 1.** BoxA sequence



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



**Fig. 3.** Migration assay with 3T3 mouse cells

- Urbanaviciute *et al* (2008) Induction of inflammatory and immune responses by HMGB1-nucleosome complexes: implications for the pathogenesis of SLE. *J Exp Med* 205: 3007-18.  
 Yang *et al* (2004). Reversing established sepsis with antagonists of endogenous HMGB1 *Proc Natl Acad Sci USA* 101: 296-301