Datasheet for ABIN1176829

HMGB1 Protein (Non-oxidizable)

2 Images | 1 Publication

Go to Product page

Overview

Quantity:	100 µg
Target:	HMGB1
Protein Characteristics:	Non-oxidizable
Origin:	Human, Mouse, Rat
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Activation (Act), Cellular Assay (CA)

Product Details

Sequence:	MGKGDPKKPR GKMSSYAFFV QTSREEHKKK HPDASVNFSE FSKKSSERWK TMSAKEKGKF EDMAKADKAR YEREMKTYIP PKGETKKKFK DPNAPKRPPS AFFLFSSEYR PKIKGEHPGL SIGDVAKKLG EMWNNTAADD KQPYEKKAAK LKEKYEKDIA AYRAKGKPDA AKKGVVKAEK SKKKKEEEDD EEDEEDEEEE EEEEDEDEEE DDDDE
Characteristics:	This product is a mutant protein where all cysteines are replaced with serines. Non-oxidizable chemokine-HMGB1, LPS free, has chemoattractant activity in vitro and in vivo, does not have cytokine-inducing activity and is resistant to inactivation by ROS. This product is produced in E.coli. The product can be used to recruit leukocytes in vivo without inducing cytokine/chemokine production (Venereau et al, 2012). It contains only trace amounts of LPS (<0.4 ng/mg protein), and is tested for the ability y to induce fibroblast migration. LPS free. Measured by its ability to induce migration. Maximal activity in the cell migration assay is obtained at 1 nM.

Product Details

Purification:	Purified
Purity:	> 95 %
Endotoxin Level:	The purified protein is free from LPS (Cambrex Limulus Amoebocyte Assay QCL-1000, <0.4 ng LPS per mg protein).

Target Details

Target:	HMGB1
Alternative Name:	High-mobility group protein B1 (HMGB1) (HMGB1 Products)
Background:	HMGB1 is a nuclear protein that is released passively by necrotic cells, retained by apoptotic cells, and secreted actively by inflammatory cells. HMGB1 is essential for life: Hmgb1 knockout mice die shortly after birth.HMGB1 contains three conserved cysteine residues (C23, C45 and C106) and is a redox-sensitive. Chemotaxis-HMGB1 (the form with chemoattractanct activity) is completely reduced, cytokine-HMGB1 contains a disulfide bond between C23 and C45, further oxidation to sulfonates abrogate both activities.In Non-oxidizable chemokine-HMGB1 all cysteines are replaced with serines: these replacements preserve chemoattractant activity in vitro and in vivo, eliminate the cytokine-inducing activity and make the protein resistant to inactivation by ROS. HMGB1 consists of two fairly rigid, L-shaped DNA-binding domains, each referred to as a 'HMG box', and an unstructured tail that ends with 30 consecutive negatively charged amino acids. Non-oxidizable chemokine-HMGB1 consists of 215 amino acid residues and has a calculated molecular mass of approximately 24.8 kDa.
Pathways:	p53 Signaling, Regulation of Muscle Cell Differentiation, Skeletal Muscle Fiber Development, Positive Regulation of Endopeptidase Activity, Regulation of Carbohydrate Metabolic Process, Toll-Like Receptors Cascades, Smooth Muscle Cell Migration, Inflammasome

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Buffer:	Non-oxidizable chemokine-HMGB1 is lyophilized from 50 mM HEPES buffer, pH 7.9 and 500 mM NaCl.

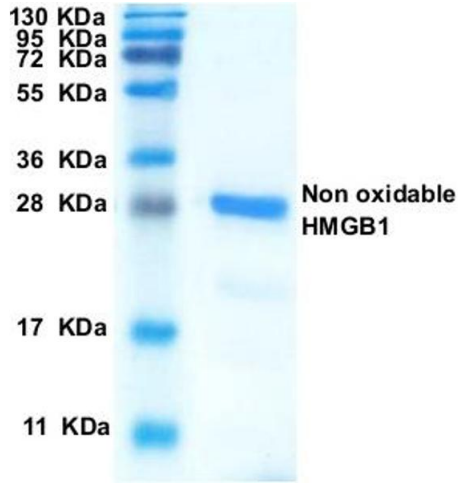
Handling

Storage:	4 °C/-20 °C
Storage Comment:	The protein once resuspended can be stored frozen (-20°C).

Publications

Product cited in:	Venereau, Casalgrandi, Schiraldi, Antoine, Cattaneo, De Marchis, Liu, Antonelli, Preti, Raeli, Shams, Yang, Varani, Andersson, Tracey, Bachi, Uguccioni, Bianchi: "Mutually exclusive redox forms of HMGB1 promote cell recruitment or proinflammatory cytokine release." in: **The Journal of experimental medicine**, Vol. 209, Issue 9, pp. 1519-28, (2012) (PubMed).

Images



SDS-PAGE

Image 1. SDS-PAGE with Coomassie Blue staining

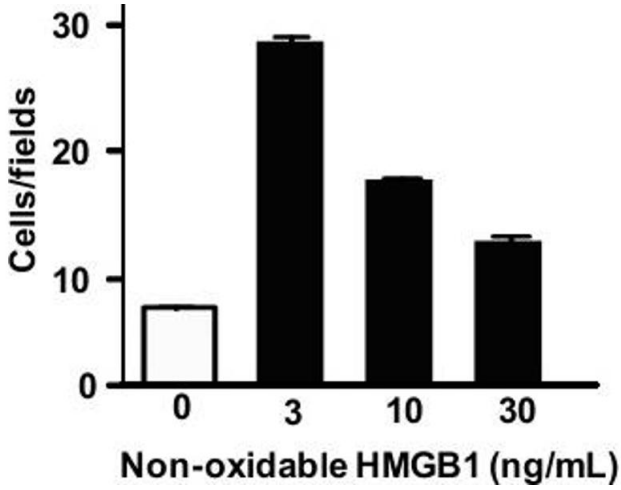


Image 2. Migration assay with 3T3 mouse cells