

ARG81310 Mouse/Rat HMGB1 ELISA Kit

Package: 96 wells
Store at: 4°C

Summary

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| Product Description | ARG81310 Mouse/Rat HMGB1 ELISA Kit is an Enzyme Immunoassay kit for the quantification of Mouse/Rat HMGB1 in plasma, cell culture supernatants and cell/tissue lysate samples. |
| Tested Reactivity | Ms, Rat |
| Tested Application | ELISA |
| Specificity | Cross-react to mouse HMGB2 is less than 5%. |
| Target Name | HMGB1 |
| Conjugation | HRP |
| Conjugation Note | Substrate: TMB and read at 450 nm. |
| Sensitivity | 0.3 ng/ml |
| Sample Type | Plasma, cell culture supernatants, Bronchoalveolar lavage fluid (BALF) and cell/tissue lysate samples. |
| Standard Range | 0.3125 - 20 ng/ml |
| Sample Volume | 100 µl |
| Precision | < 5.2% |
| Alternate Names | HMG-1; High mobility group protein B1; High mobility group protein 1; HMG1; SBP-1; HMG3 |

Application Instructions

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|------------|-----------|
| Assay Time | Overnight |
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Properties

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| Form | 96 well |
| Storage instruction | Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components. |
| Note | For laboratory research only, not for drug, diagnostic or other use. |

Bioinformation

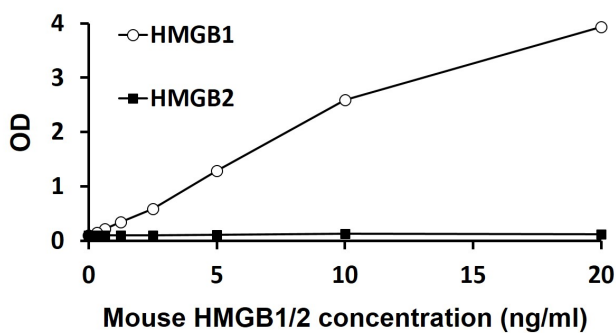
| | |
|----------------|---|
| Gene Symbol | Hmgb1 |
| Gene Full Name | high mobility group box 1 |
| Background | HMGB1 is a protein that belongs to the High Mobility Group-box superfamily. The encoded non-histone, nuclear DNA-binding protein regulates transcription, and is involved in organization of DNA. This protein plays a role in several cellular processes, including inflammation, cell differentiation and tumor cell migration. Multiple pseudogenes of this gene have been identified. Alternative splicing results in multiple transcript variants that encode the same protein. [provided by RefSeq, Sep 2015] |

Function HMGB1 is a DNA binding protein. It associates with chromatin and has the ability to bend DNA. Binds preferentially single-stranded DNA. Involved in V(D)J recombination by acting as a cofactor of the RAG complex. Acts by stimulating cleavage and RAG protein binding at the 23 bp spacer of conserved recombination signal sequences (RSS). [UniProt]

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PTM Phosphorylated at serine residues. Phosphorylation in both NLS regions is required for cytoplasmic translocation followed by secretion (PubMed:17114460). Acetylated on multiple sites upon stimulation with LPS (PubMed:22801494). Acetylation on lysine residues in the nuclear localization signals (NLS 1 and NLS 2) leads to cytoplasmic localization and subsequent secretion (By similarity). Acetylation on Lys-3 results in preferential binding to DNA ends and impairs DNA bending activity (By similarity). Reduction/oxidation of cysteine residues Cys-23, Cys-45 and Cys-106 and a possible intramolecular disulfide bond involving Cys-23 and Cys-45 give rise to different redox forms with specific functional activities in various cellular compartments: 1- fully reduced HMGB1 (HMGB1C23hC45hC106h), 2- disulfide HMGB1 (HMGB1C23-C45C106h) and 3- sulfonyl HMGB1 (HMGB1C23soC45soC106so). Poly-ADP-ribosylated by PARP1 when secreted following stimulation with LPS (By similarity). In vitro cleavage by CASP1 is liberating a HMGB box 1-containing peptide which may mediate immunogenic activity; the peptide antagonizes apoptosis-induced immune tolerance (PubMed:24474694). Can be proteolytically cleaved by a thrombin:thrombomodulin complex.

Images



ARG81310 Mouse/Rat HMGB1 ELISA Kit standard curve image

ARG81310 Mouse/Rat HMGB1 ELISA Kit results of a typical standard run with optical density reading at 450 nm.