ARG10756
anti-HMGB1 antibody [1F3]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal to Anti-High-mobility group protein B1, HMGB1
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-Fr, WB
Host	Mouse
Clonality	Monoclonal
Clone	1F3
Isotype	IgG2b
Target Name	HMGB1
Species	Human
Immunogen	Human full length protein expressed and purified form E. coli.
Conjugation	Un-conjugated
Alternate Names	HMG-1; High mobility group protein B1; High mobility group protein 1; HMG1; SBP-1; HMG3

Application Instructions

Application table

Application	Dilution
ICC/IF	1:1000
IHC-Fr	1:1000
WB	1:1000 - 1:2000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

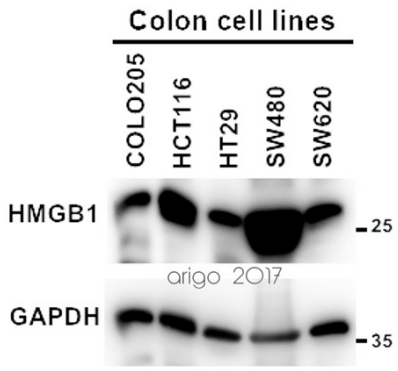
Properties

Form	Liquid
Purification	Affinity purification.
Buffer	PBS and 50% Glycerol.
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

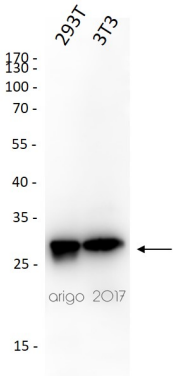
Database links	GeneID: 15289 Mouse GeneID: 3146 Human Swiss-port # P09429 Human Swiss-port # P63158 Mouse
Gene Symbol	HMGB1
Gene Full Name	high mobility group box 1
Background	HMGB1 is a protein that belongs to the High Mobility Group-box superfamily. The encoded non-histone, nuclear DNA-binding protein 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]
Highlight	Related products: HMGB1 antibodies; HMGB1 ELISA Kits; HMGB1 Duos / Panels; HMGB1 recombinant proteins; Anti-Mouse IgG secondary antibodies; Related news: HMGB1, a biomarker and therapeutic target in COVID-19 Total solution for HMGB1 research HMGB1 in inflammation Inflammatory Cytokines HMGB1 ELISA Kit for your research Detecting the DAMPs in cancer therapy by HMGB1 ELISA kit New HMGB1 neutralizing antibody is released Detecting exosomal HMGB1 for ICD research Related poster download: HMGB1 Pathway.pdf
Calculated Mw	25 kDa
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 HMG 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; reduces binding to heparin and proinflammatory activities (By similarity).

Images



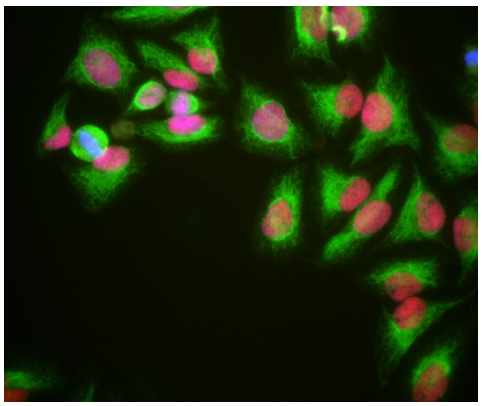
ARG10756 anti-HMGB1 antibody [1F3] WB image

Western blot: 20 µg of COLO205, HCT116, HT29, SW480 and SW620 cell lysates stained with ARG10756 anti-HMGB1 antibody [1F3] (1:2000) and ARG65680 anti-GAPDH antibody (1:10000).



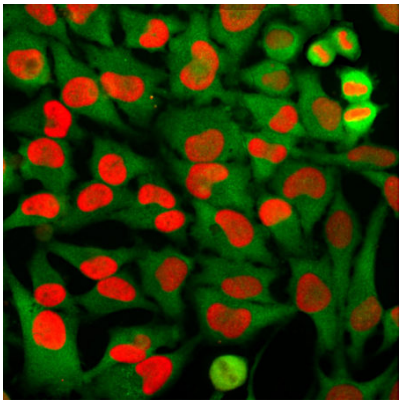
ARG10756 anti-HMGB1 antibody [1F3] WB image

Western blot: 30 µg of 293T and 3T3 cell lysates stained with ARG10756 anti-HMGB1 antibody [1F3] at 1:1000 dilution.



ARG10756 anti-HMGB1 antibody [1F3] ICC/IF image

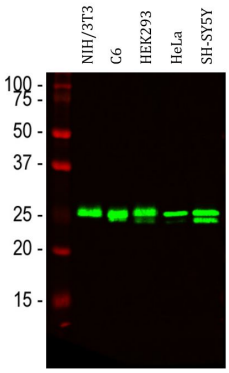
Immunocytochemistry: HeLa cells grown in tissue culture and stained with ARG10756 anti-HMGB1 antibody [1F3] (red) and co-stained with chicken polyclonal antibody to Vimentin (green); DNA (blue). ARG10756 anti-HMGB1 antibody [1F3] reveals strong nuclear staining which overlaps with the DNA stain.



ARG10756 anti-HMGB1 antibody [1F3] ICC/IF image

Immunofluorescence: HeLa cells stained with ARG10756 anti-HMGB1 antibody [1F3] (red) at 1:2000 dilution and costained with Rabbit pAb to GAPDH (green) at 1:2000 dilution.

Clone 1F3 stains the chromatin binding protein HMGB1, which is localized in the nuclei. In contrast the GAPDH antibody produces strong cytoplasmic staining of cells.



ARG10756 anti-HMGB1 antibody [1F3] WB image

Western blot: NIH/3T3, C6, HEK293, HeLa and SH-SY5Y cell lysates stained with ARG10756 anti-HMGB1 antibody [1F3] (green) at 1:2000 dilution.