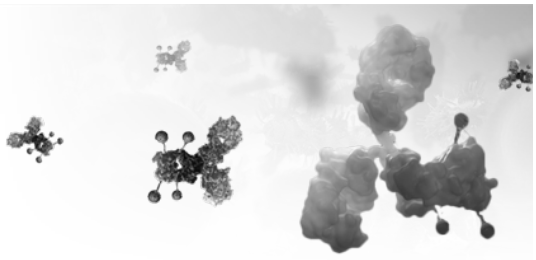

Rabbit Anti-Human HMG1 Polyclonal Antibody (CABT-L2096)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Polyclonal Antibody to High Mobility Group Protein 1 (Knockout Validated)
Specificity	The antibody is a rabbit polyclonal antibody raised against HMG1. It has been selected for its ability to recognize HMG1 in immunohistochemical staining and western blotting.
Target	HMG1
Immunogen	Recombinant fragment corresponding to human HMGB1 (Pro9~Arg163)
Isotype	IgG
Source/Host	Rabbit
Species Reactivity	Human
Purification	Antigen-specific affinity chromatography followed by Protein A affinity chromatography
Conjugate	Unconjugated
Applications	WB
Format	Liquid
Concentration	Lot specific
Size	200 µg
Buffer	Supplied as solution form in 0.01M PBS with 50% glycerol, pH7.4.
Preservative	0.05% Proclin-300

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Storage	Avoid repeated freeze/thaw cycles. Store at 4°C for frequent use. Aliquot and store at -20°C for 12 months.
Ship	4°C with ice bags

BACKGROUND

Introduction	Human High-mobility group box 1 protein (HMGB1), previously known as HMG-1 or amphoterin, is a member of the high mobility group box family of non-histone chromosomal proteins. Human HMGB1 is expressed as a 30 kDa, 215 amino acid (aa) single chain polypeptide containing three domains: two N-terminal globular, 70 aa positively charged DNA-binding domains (HMG boxes A and B), and a negatively charged 30 aa C-terminal region that contains only Asp and Glu. Residues 27-43 and 178-184 contain a NLS. Posttranslational modifications of the molecule have been reported, with acetylation occurring on as many as 17 lysine residues. HMGB1 is expressed at high levels in almost all cells. It was originally discovered as a nuclear protein that could bend DNA. Such bending stabilizes nucleosome formation and regulates the expression of select genes upon recruitment by DNA binding proteins. It is now known that HMGB1 can also act extracellularly, both as an inflammatory mediator that promotes monocyte migration and cytokine secretion, and as a mediator of T cell-dendritic cell interaction. The cytokine activity of HBMG1 is restricted to the HMG B box, while the A box is associated with the helix-loop-helix domain of transcription factors. HMBG1 is released in response to cell death and as a secretion product. Although HMBG-1 does not possess a classic signal sequence, it appears to be secreted as an acetylated form via secretory endolysosome exocytosis. Once secreted, HMGB1 transduces cellular signals through its high affinity receptor, RAGE and, possibly, TLR2 and TLR4. Human HMGB1 is 100% aa identical to canine HMGB1 and 99% aa identical to mouse, rat, bovine and porcine HMGB1, respectively.
Keywords	HMGB1;HMG3;SBP1;Sulfoglucuronyl Carbohydrate Binding Protein;Amphoterin;High Mobility Group Box 1 Protein

GENE INFORMATION

Gene Name	HMGB1 high mobility group box 1 [Homo sapiens (human)]
Official Symbol	HMGB1
Synonyms	HMGB1; high mobility group box 1; HMG1; HMG3; SBP-1; high mobility group protein B1; HMG-1; Amphoterin; high-mobility group box 1; high mobility group protein 1; Sulfoglucuronyl carbohydrate binding protein; high-mobility group (nonhistone chromosomal) protein 1;
Protein Refseq	NP_002119

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UniProt ID	A0A024RDR0
Chromosome Location	13q12
Pathway	Activated TLR4 signalling; Activation of DNA fragmentation factor; Advanced glycosylation endproduct receptor signaling; Apoptosis; Apoptosis induced DNA fragmentation; Apoptotic execution phase; Base excision repair; Cytosolic sensors of pathogen-associated DNA;
Function	DNA binding, bending; RAGE receptor binding; chemoattractant activity; chromatin binding; cytokine activity; damaged DNA binding; double-stranded DNA binding; poly(A) RNA binding; protein binding; repressing transcription factor binding; sequence-specific DNA binding transcription factor activity; single-stranded DNA binding; transcription factor binding;

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