

**Amphoterin (150 - 183)**  
**Synthetic Peptide**  
**Catalog # SP2294a****Specification**

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**Amphoterin (150 - 183) - Product Information**Primary Accession  
Sequence[P63159](#)  
NH2-KLKEYEKDIAAYRAKGKPDAAKKGVVKA  
EKSKK-COOH**Amphoterin (150 - 183) - Additional Information****Gene ID** 25459**Other Names**

High mobility group protein B1, Amphoterin, Heparin-binding protein p30, High mobility group protein 1, HMG-1, Hmgb1, Hmg-1, Hmg1

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**Amphoterin (150 - 183) - Protein Information****Name** Hmgb1**Synonyms** Hmg-1, Hmg1**Function**

Multifunctional redox sensitive protein with various roles in different cellular compartments. In the nucleus is one of the major chromatin-associated non-histone proteins and acts as a DNA chaperone involved in replication, transcription, chromatin remodeling, V(D)J recombination, DNA repair and genome stability. Proposed to be an universal biosensor for nucleic acids. Promotes host inflammatory response to sterile and infectious signals and is involved in the coordination and integration of innate and adaptive immune responses. In the cytoplasm functions as a sensor and/or chaperone for immunogenic nucleic acids implicating the activation of TLR9-mediated immune responses, and mediates autophagy. Acts as a danger-associated molecular pattern (DAMP) molecule that amplifies immune responses during tissue injury. Released to the extracellular environment can bind DNA, nucleosomes, IL-1 beta, CXCL12, AGER isoform 2/sRAGE, lipopolysaccharide (LPS) and lipoteichoic acid (LTA), and activates cells through engagement of multiple surface receptors. In the extracellular compartment fully reduced HMGB1 (released by necrosis) acts as a chemokine, disulfide HMGB1 (actively secreted) as a cytokine, and sulfonyl

HMGB1 (released from apoptotic cells) promotes immunological tolerance (PubMed:<a href="http://www.uniprot.org/citations/23519706" target="\_blank">23519706</a>, PubMed:<a href="http://www.uniprot.org/citations/23446148" target="\_blank">23446148</a>, PubMed:<a href="http://www.uniprot.org/citations/23994764" target="\_blank">23994764</a>, PubMed:<a href="http://www.uniprot.org/citations/25048472" target="\_blank">25048472</a>). Has proangiogenic activity. May be involved in platelet activation. Binds to phosphatidylserine and phosphatidylethanolamide (PubMed:<a href="http://www.uniprot.org/citations/11154118" target="\_blank">11154118</a>). Bound to RAGE mediates signaling for neuronal outgrowth (PubMed:<a href="http://www.uniprot.org/citations/1885601" target="\_blank">1885601</a>, PubMed:<a href="http://www.uniprot.org/citations/2461949" target="\_blank">2461949</a>, PubMed:<a href="http://www.uniprot.org/citations/7592757" target="\_blank">7592757</a>, PubMed:<a href="http://www.uniprot.org/citations/12183440" target="\_blank">12183440</a>). May play a role in accumulation of expanded polyglutamine (polyQ) proteins.

### Cellular Location

Nucleus. Cytoplasm. Secreted. Chromosome. Cell membrane; Peripheral membrane protein; Extracellular side. Endosome {ECO:0000250|UniProtKB:P63158} Endoplasmic reticulum-Golgi intermediate compartment {ECO:0000250|UniProtKB:P63158}. Note=In basal state predominantly nuclear. Shuttles between the cytoplasm and the nucleus. Nuclear export is in part XPO1-dependent implicating NES contained in both HMG boxes 1 and 2 (PubMed:14532127). Release from macrophages in the extracellular milieu requires the activation of NLRC4 or NLRP3 inflammasomes (By similarity). Passively released to the extracellular milieu from necrotic cells by diffusion, involving the fully reduced form which subsequently gets oxidized (PubMed:22869893). Actively secreted from a variety of immune and non-immune cells such as macrophages, monocytes, neutrophils, dendritic cells and natural killer cells in response to various stimuli, involving a nonconventional secretory process via secretory lysosomes. Secreted by plasma cells in response to LPS (By similarity). Associated with the plasma membrane of filipodia in process-growing cells, and also deposited into the substrate-attached material (PubMed:1885601). {ECO:0000250|UniProtKB:P63158, ECO:0000269|PubMed:14532127, ECO:0000269|PubMed:15808513, ECO:0000269|PubMed:1885601, ECO:0000269|PubMed:22869893}

### Amphoterin (150 - 183) - Images