

HMGB1

Multi-tasker of the innate immune system.

IMMUNOLOGY / CYTOKINES

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At the center of HMGB1 research.

Over the years, HMGB1 has increasingly attracted the attention of academic as well as clinical researchers and has become one of the most intriguing molecules within the complete arsenal of proteins of the innate immune system.

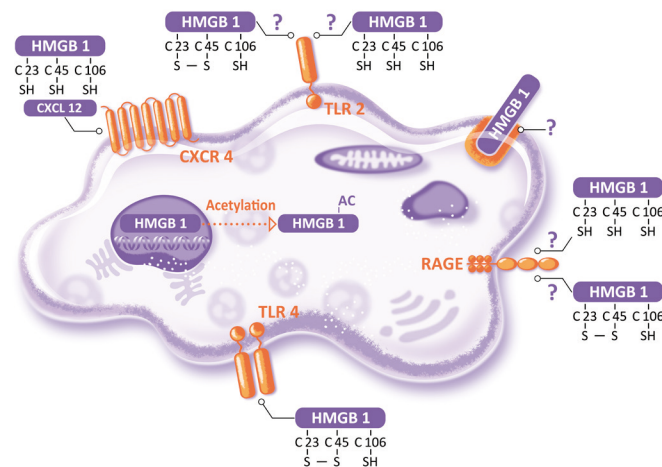
HMGB1 is a nuclear protein that can bind and bend DNA, but it can also be released to the extracellular environment where it exerts additional functions.

The unraveling of the post-translational modifications has led to a better understanding of the mechanism of its translocation and its function within the immune system.

As of today it is known that acetylation of HMGB1 is necessary, so that it can be translocated from the nucleus to the cytosol, that the fully reduced HMGB1 isoform has chemotactic effects and causes the migration of immune cells to the danger zone and that the disulfide HMGB1 isoform acts as a pro-inflammatory cytokine inducing production of further cytokines.

It will now also allow more in-depth studies into the role of HMGB1 in numerous pathologies, including

- Autoimmune diseases
- CNS-related diseases
- Sepsis
- Cancer
- Diabetes
- Cardial infarction
- Stroke
- ... any inflammatory process



Different HMGB1 redox isoforms determine their location and biological function.

IBL INTERNATIONAL AT THE CENTER OF HMGB1 RESEARCH

Through its collaboration with HMGB1 experts from academia and commercial partners, IBL International is at the forefront of new developments. We at IBL International offer the most complete range of products - including a highly sensitive ELISA for the quantitative measurement of HMGB1 - which have been widely used and are cited in many publications.

(If you wish to receive a complete list of the referenced articles, please contact us at ibl@tecan.com)

HMGB1 PRODUCTS

Immunoassay	Catalog#	Determ.	Assay range	Incubation time	Sample type
HMGB1 ELISA	ST51011	96 well	2.5 – 80 ng/mL or 0.313 – 10 ng/mL	1st: 37 °C, 18 h 2nd: RT, 2 h 3rd: RT, 30 min	Serum ¹³ , plasma ¹⁴ , BALF ¹⁵ , CSF ¹⁶ , urine ¹⁷ , cell culture supernatant ¹⁸ and tissue extracts ¹⁹ All mammals ²⁰⁻²³

For Research use only

Antibodies*	Catalog#	Quantity	Intended use
Anti-HMGB1 Rabbit IgG PoAb	ST326052219	50 µg	WB (1-2 µg/mL), IHC ²⁴ , immunofluorescence ²⁵ and immunoprecipitation ²⁶
Anti-HMGB1 Chicken IgY PoAb	ST326052226	50 µg	WB ²⁷ (1-2 µg/mL)
Anti-HMGB1 Chicken IgY Neutralising PoAb	ST326052233	1 mg	WB and neutralization experiments ²⁸⁻³¹ (2 mg/kg/mouse)
Anti-HMGB1,2 Mouse IgG1 MoAb	ST326052240	50 µg	WB (1-2 µg/mL)
Anti-HMGB1 [DPH1.1] Mouse IgG1 MoAb	REHM901	50 µg	WB ³² (1 µg/mL), immunofluorescence ³² , IHC, blocking experiments in cell migration assay ³² and blocking recruitment of inflammatory cells to sites of necrosis and infection in vitro and in vivo (220 µg/mouse) ³²
	REHM902	250 µg	
	REHM903	1 mg	

Protein isoforms and related proteins*	Catalog#	Quantity	Intended use
Fully reduced HMGB1, LPS-free	REHM114	500 µg	To study HMGB1 cell migratory effects in vitro ³³ and in vivo
	REHM115	100 µg	
	REHM116	50 µg	
Disulfide HMGB1, LPS-free	REHM120	500 µg	To study HMGB1 induced cytokine effects in proinflammatory processes ³⁵
	REHM121	100 µg	
	REHM122	50 µg	
BoxA from HMGB1, LPS-free	REHM012	100 µg	To study HMGB1-RAGE interaction by using BoxA as an antagonist for HMGB1 ^{33,34}
	REHM013	500 µg	
	REHM014	2 mg	
BoxB from HMGB1, LPS-free	REHM052	100 µg	To study HMGB1 induced cytokine activity by measuring BoxB as a read out ³⁶
	REHM051	250 µg	
	REHM050	1 mg	
HMGB2, LPS-free	REHM151	500 µg	To study HMGB2 induced fibroblast migration ³⁷
	REHM152	100 µg	
	REHM153	50 µg	

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