

Datasheet for ABIN1580427
anti-HMGB1 antibody



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2 Images

Overview

Quantity:	100 µL
Target:	HMGB1
Reactivity:	Human, Mouse, Rat, Cow, Pig, Mammalian
Host:	Mouse
Clonality:	Monoclonal
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunocytochemistry (ICC)

Product Details

Clone:	1F3
Isotype:	IgG2b
Purification:	affinity purified antibody

Target Details

Target:	HMGB1
Alternative Name:	High mobility group box 1, Amphoterin, HMGB1 (HMGB1 Products)
Background:	High-mobility group proteins were named originally since they are abundant relatively low molecular weight proteins which run quickly on SDS-PAGE gels. High-mobility group proteins box 1 (HMGB1) is one of these. The bx in the name refers to the so-called high mobility group (HMG) box, a compact domain involved in DNA binding and protein-protein interactions. The HMGB1 molecule has two of these HMG domains. The protein is also called amphoterin, this

Target Details

name being derived from the presence of two highly charged regions in the molecule, a relatively neutrally charged N-terminus and a very negatively charged C-terminus. In fact, the molecule is very unusually charged throughout, the human sequence consisting of 16.7% Glutamic acid, 9.3% Aspartic acid, 20% Lysine and 9.3% Arginine. HMGB1 can bind Toll like receptor 4 (TLR4) and the Receptor for Advanced Glycation End products (RAGE). TLRs are components of the innate immune system, first recognized as a family of receptors which recognize Pathogen Associated Molecular Pattern molecules (PAMPs). PAMPs are common components of bacteria and when TLRs bind these, a strong inflammatory response is activated. More recently it has been recognized that TLRs can also be activated by Damage Associated Molecular Pattern molecules (DAMPs), which are endogenous substances released from damaged and diseased cells which also bind to TLR family receptors and also activate inflammation. HMGB1 is such a DAMP, binding to TLR4, and much evidence suggests that HMGB1 is a strong activator of inflammation. Interestingly, HMGB1 is released by necrotic cells but not by apoptotic cells. The HGNC name for this protein is HBGB1.

Pathways: [p53 Signaling](#), [Regulation of Muscle Cell Differentiation](#), [Skeletal Muscle Fiber Development](#), [Positive Regulation of Endopeptidase Activity](#), [Regulation of Carbohydrate Metabolic Process](#), [Toll-Like Receptors Cascades](#), [Smooth Muscle Cell Migration](#), [Inflammasome](#)

Application Details

Application Notes: The antibody solution can be used at dilutions of 1:1,000 or higher in immunofluorescence experiments. In western blotting using chemiluminescence it can be used at dilutions of 1:1,000-2,000.

Restrictions: For Research Use only

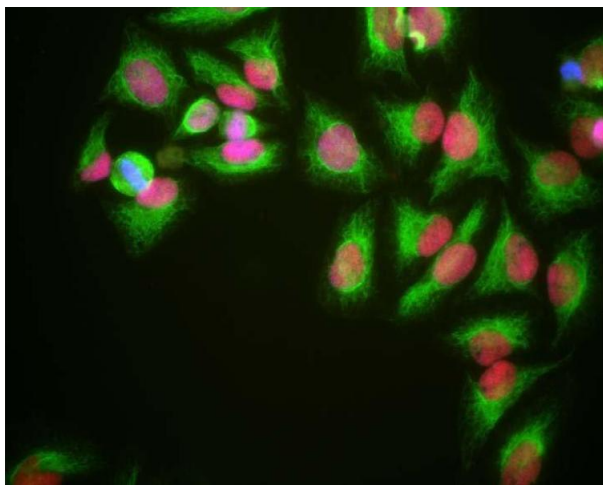
Handling

Format:	Liquid
Concentration:	1 mg/mL
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	Avoid repeated freezing and thawing.
Storage:	4 °C/-20 °C

Handling

Storage Comment: Store at 4°C short term or -20°C long term.

Images



Immunofluorescence

Image 1. HeLa cells grown in tissue culture and stained with ABIN1580427 (red), chicken polyclonal antibody to Vimentin CPCA-VIM (green) and DNA (blue). The ABIN1580427 antibody reveals strong nuclear staining which overlaps with the DNA stain.



Western Blotting

Image 2. Blot of crude HeLa cell extract stained with MCS-1F3. HMGB1 runs at an apparent molecular weight of 25kDa.