


Product datasheet

Anti-HMGA1 α / HMGA1b antibody ab4078

★★★★★ [2 Abreviews](#) [28 References](#) [3 Images](#)

Overview

Product name	Anti-HMGA1a / HMGA1b antibody
Description	Rabbit polyclonal to HMGA1a / HMGA1b
Host species	Rabbit
Specificity	This antibody detects, by Western blot on human GFP fusion proteins in cell lysate, both HMGA1a and the splice variant HMGA1b, but does not detect HMGA2 (see review and Western blot picture). The antibody has not yet been successfully used to detect endogenous protein.
Tested applications	Suitable for: WB, IHC-P, ChIP, ICC/IF
Species reactivity	Reacts with: Mouse, Human, Zebrafish Predicted to work with: Rat, Chicken, Neurospora crassa, Chinese hamster 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	This antibody gave a positive result in human placenta FFPE tissue sections
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS
	Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

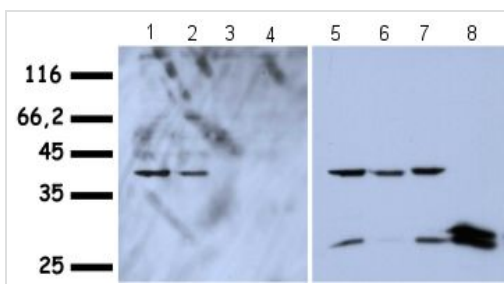
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab4078 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (1)	1/1000. Detects a band of approximately 11 kDa (predicted molecular weight: 11.5 kDa).
IHC-P		Use at an assay dependent concentration.
ChIP	★★★★★ (1)	Use at an assay dependent concentration. See Abreview submitted on 15 December 2009.
ICC/IF		1/250 - 1/500. Although this antibody gives a specific signal in Immunofluorescence, we have had suggestions that strong background signals are seen. See review by Robert Hock and IF picture below.

Target

Function	HMG-I/Y bind preferentially to the minor groove of A+T rich regions in double stranded DNA. It is suggested that these proteins could function in nucleosome phasing and in the 3'-end processing of mRNA transcripts. They are also involved in the transcription regulation of genes containing, or in close proximity to A+T-rich regions.
Involvement in disease	Note=A chromosomal aberration involving HMGA1 is found in pulmonary chondroid hamartoma. Translocation t(6;14)(p21;q23-24) with RAD51L1.
Sequence similarities	Belongs to the HMGA family. Contains 3 A.T hook DNA-binding domains.
Post-translational modifications	Constitutively phosphorylated on two or three sites. Phosphorylated upon DNA damage, probably by ATM or ATR. Hyperphosphorylated at early stages of apoptosis, followed by dephosphorylation and methylation, which coincides with chromatin condensation. Isoform HMG-Y can be phosphorylated by HIPK2. HMG-Y is not methylated. Methylation at Arg-58 is mutually exclusive with methylation at Arg-60.
Cellular localization	Nucleus. Chromosome.

Images



Western blot - Anti-HMGA1a / HMGA1b antibody (ab4078)

This image is courtesy of Mbnika Harrer

Lanes 1-4 : Anti-HMGA1a / HMGA1b antibody (ab4078) at 1/1000 dilution

Lanes 5-8 : Anti-GFP

Lane 1 : Whole cell lysate from HepG2 cells transfected with plasmids coding for hHMGA1a GFP fusion proteins.

Lanes 2 & 6 : Whole cell lysate from HepG2 cells transfected with plasmids coding for hHMGA1b-GFP fusion proteins

Lanes 3 & 7 : Whole cell lysate from HepG2 cells transfected with plasmids coding for hHMGA2-GFP fusion proteins

Lane 4 : Whole cell lysate from HepG2 cells transfected with plasmids coding for NLS-GFP fusion proteins

Lane 5 : Whole cell lysate from HepG2 cells transfected with plasmids coding for hHMGA1a-GFP fusion proteins

Lane 8 : Whole cell lysate from HepG2 cells transfected with plasmids coding for NLS-GFP fusion proteins

Secondary

All lanes : Anti-rabbit HRP at 1/10000 dilution

Performed under reducing conditions.

Predicted band size: 11.5 kDa

Western blot using ab4078.

Whole cell lysate from HepG2 cells transfected with plasmids coding for hHMGA1a-, hHMGA1b-, hHMGA2- or NLS- (nuclear localisation signal) GFP fusion proteins.

ab4078 was diluted 1/1000 in 5% milk/TBS and incubated for 1 hr at room temperature. Secondary HRP anti-rabbit antibody was diluted 1/10000 in 5% milk/TBS and incubated for 1 hr at room temperature.

Lane 1: hHMGA1a-GFP (ab4078)

Lane 2: hHMGA1b-GFP (ab4078)

Lane 3: hHMGA2-GFP (ab4078)

Lane 4: NLS-GFP (ab4078)

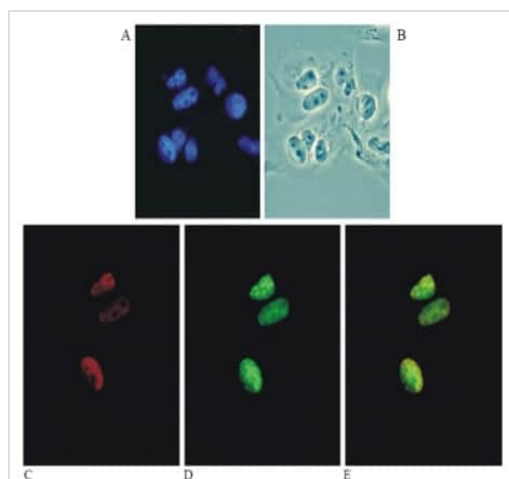
Lane 5: hHMGA1a-GFP (anti-GFP)

Lane 6: hHMGA1b-GFP (anti-GFP)

Lane 7: hHMGA2-GFP (anti-GFP)

Lane 8: NLS-GFP (anti-GFP)

The detected size is that expected for the fusion of an 11kD and 26kD protein (GFP).



Immunocytochemistry/ Immunofluorescence - Anti-HMGA1a / HMGA1b antibody (ab4078)

This image is courtesy of Robert Hock

Immunofluorescence on MCF-7 cells transfected with human HMGA1a-GFP using ab4078.

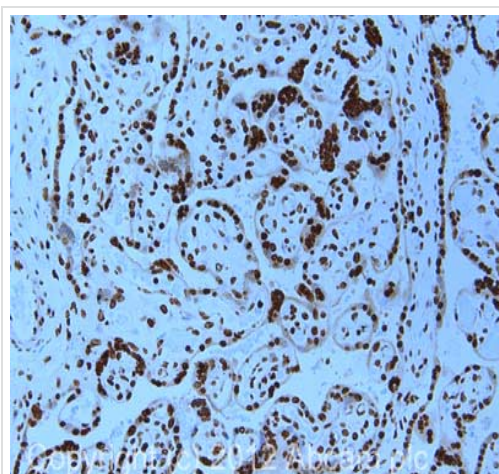
A: Hoechst stain

B: Phasecontrast

C: TexasRed HMG-I/HMG-Y (ab4078)

D: HMGA1a-GFP

E: Merge



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HMGA1a / HMGA1b antibody (ab4078)

IHC image of ab4078 staining in human placenta formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab4078, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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