




## Product datasheet

# Anti-Hes1 antibody ab49170

★★★★★ 3 Abreviews 13 References 6 Images

### Overview

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<b>Product name</b>	Anti-Hes1 antibody
<b>Description</b>	Rabbit polyclonal to Hes1
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Rat, Rabbit, Horse, Chicken, Guinea pig, Cow, Pig, Zebrafish 
<b>Immunogen</b>	Synthetic peptide corresponding to Human Hes1 aa 1-50 (internal sequence). Sequence: MPADIMEKNSSSPVAATPASVNTTPDKPKTASEHRKSSK PIMEKRRRARI  Database link: <a href="#">Q14469</a>   <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a>
<b>Positive control</b>	WB: HepG2 whole cell lysate; Ls174 cells; murine embryonic cells. IHC-P: Human liver. ICC/IF: HepG2 cells; Ls174T cells.

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: 2% Sucrose, PBS
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

### Applications

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Our [Abpromise guarantee](#) covers the use of **ab49170** in the following tested applications.

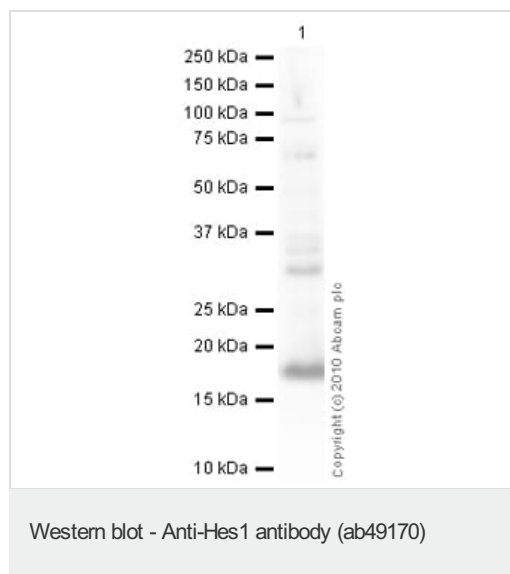
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★	Use a concentration of 1.25 µg/ml. Detects a band of approximately 30 kDa (predicted molecular weight: 30 kDa). Good results were obtained when blocked with 5% non-fat dry milk in 0.05% PBS-T.
IHC-P	★★★★☆	Use a concentration of 4 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF		Use a concentration of 5 µg/ml.

## Target

<b>Function</b>	Transcriptional repressor of genes that require a bHLH protein for their transcription. May act as a negative regulator of myogenesis by inhibiting the functions of MYOD1 and ASH1. Binds DNA on N-box motifs: 5'-CACNAG-3' with high affinity and on E-box motifs: 5'-CANNTG-3' with low affinity.
<b>Sequence similarities</b>	Contains 1 basic helix-loop-helix (bHLH) domain. Contains 1 Orange domain.
<b>Domain</b>	Has a particular type of basic domain (presence of a helix-interrupting proline) that binds to the N-box (CACNAG), rather than the canonical E-box (CANNTG). The C-terminal WRPW motif is a transcriptional repression domain necessary for the interaction with Groucho/TLE family members, transcriptional corepressors recruited to specific target DNA by Hairy-related proteins. The bHLH, as well as cooperation between the central Orange domain and the C-terminal WRPW motif, is required for transcriptional repressor activity.
<b>Cellular localization</b>	Nucleus.

## Images



Anti-Hes1 antibody (ab49170) at 1 µg/ml + HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate at 10 µg

### Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed ([ab97080](#)) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

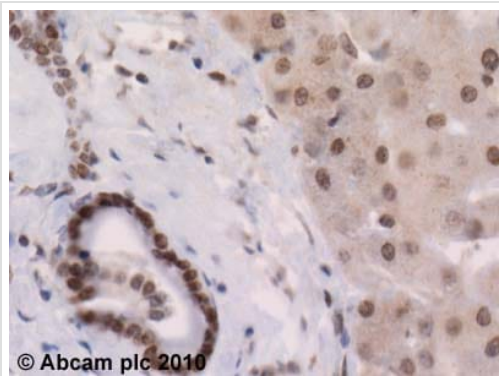
**Predicted band size:** 30 kDa

**Observed band size:** 30 kDa

**Additional bands at:** 17 kDa, 70 kDa. We are unsure as to the

identity of these extra bands.

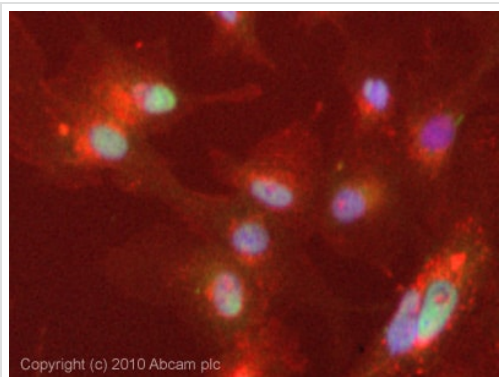
**Exposure time:** 30 seconds



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Hes1 antibody (ab49170)

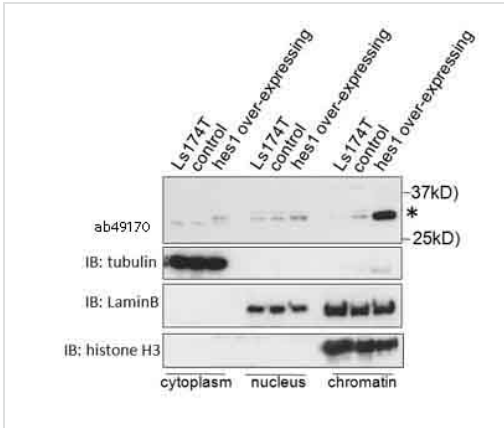
ab49170 (4µg/ml) staining Hes1 in human liver using an automated system (DAKO Autostainer Plus). Using this protocol there is weak cytoplasmic staining in plates of hepatic cells. However there is stronger nuclear staining in the plates of hepatic cells and hepatic arteries.

Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffers EDTA pH 9.0 in a DAKO PT link. Slides were peroxidase blocked in 3% H<sub>2</sub>O<sub>2</sub> in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that, for manual staining, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.



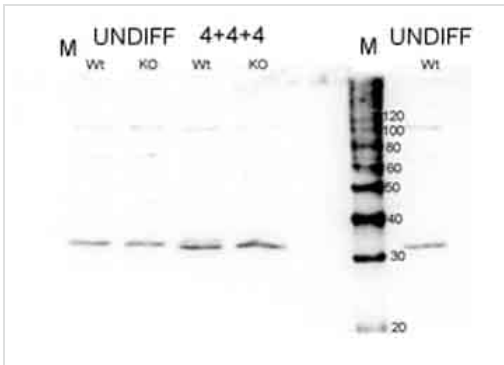
Immunocytochemistry/ Immunofluorescence - Anti-Hes1 antibody (ab49170)

ICC/IF image of ab49170 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab49170, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



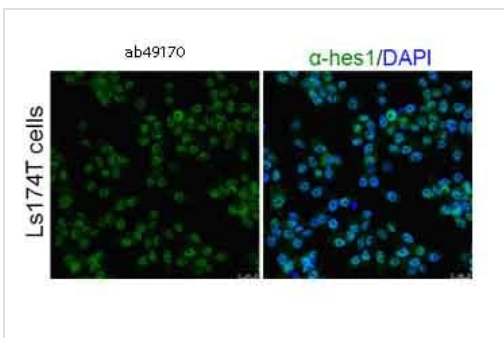
Western blot - Anti-Hes1 antibody (ab49170)

Western Blot using lysate prepared from Hes1 transfected Ls174 cells. ab49170 used at a 1µg/ml.



Western blot - Anti-Hes1 antibody (ab49170)

Western blot using lysate prepared from murine embryonic cells. ab49170 used at a 1/800 dilution and the secondary was used at a 1/5000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Hes1 antibody (ab49170)

ab49170 at 50µg/ml staining Hes1 in Ls174T cells by Immunocytochemistry/ Immunofluorescence.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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