abcam

Product datasheet

Anti-Menin antibody - ChIP Grade ab31902

KO VALIDATED

1 References 7 Images

Overview

Product name	Anti-Menin antibody - ChIP Grade
Description	Rabbit polyclonal to Menin - ChIP Grade
Host species	Rabbit
Specificity	From Jan 2024, QC testing of replenishment batches of this polyclonal changed. All tested and expected application and reactive species combinations are still covered by our Abcam product promise. However, we no longer test all applications. For more information on a specific batch, please contact our Scientific Support who will be happy to help.
Tested applications	**Suitable for:** IP, WB, ChIP, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Cow
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 600 to the C-terminus of Human Menin.Read Abcam's proprietary immunogen policy(Peptide available as **ab32961**.)
Positive control	Recombinant Menin protein (**ab114387**) can be used as a positive control in WB. This antibody gave a positive signal in the following Whole Cell Lysates: HeLa Jurkat A431 HEK 293 MEF1 (Mouse embryonic fibroblast cell line) PC12 (Rat adrenal pheochromocytoma cell line)
General notes	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. 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

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 ab31902 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
IP		Use at an assay dependent concentration.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 75 kDa (predicted molecular weight: 68 kDa).
ChIP		Use 5 µg for 25 µg of chromatin.
ICC/IF		Use a concentration of 1 µg/ml.

Target

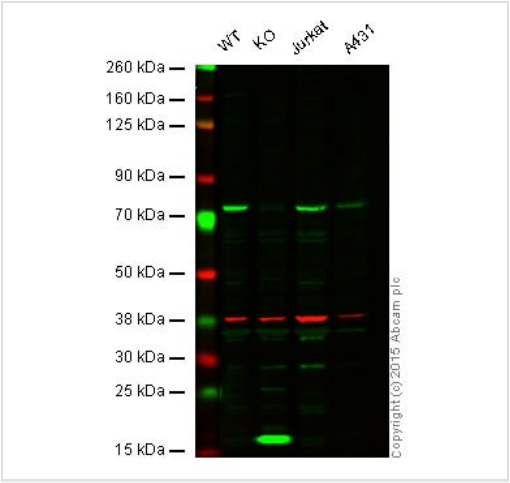
Function Essential component of a MLL/SET1 histone methyltransferase (HMT) complex, a complex that specifically methylates 'Lys-4' of histone H3 (H3K4). Functions as a transcriptional regulator. Binds to the TERT promoter and represses telomerase expression. Plays a role in TGFB1-mediated inhibition of cell-proliferation, possibly regulating SMAD3 transcriptional activity. Represses JUND-mediated transcriptional activation on AP1 sites, as well as that mediated by NFKB subunit RELA. Positively regulates HOXC8 and HOXC6 gene expression. May be involved in normal hematopoiesis through the activation of HOXA9 expression (By similarity). May be involved in DNA repair.

Tissue specificity Ubiquitous.

Involvement in disease Defects in MEN1 are the cause of familial multiple endocrine neoplasia type I (MEN1) [MIM:131100]. Autosomal dominant disorder characterized by tumors of the parathyroid glands, gastro-intestinal endocrine tissue, the anterior pituitary and other tissues. Cutaneous lesions and nervous-tissue tumors can exist. Prognosis in MEN1 patients is related to hormonal hypersecretion by tumors, such as hypergastrinemia causing severe peptic ulcer disease (Zollinger-Ellison syndrome, ZES), primary hyperparathyroidism, and acute forms of hyperinsulinemia.
Defects in MEN1 are the cause of familial isolated hyperparathyroidism (FIHP) [MIM:145000]; also known as hyperparathyroidism type 1 (HRPT1). FIHP is an autosomal dominant disorder characterized by hypercalcemia, elevated parathyroid hormone (PTH) levels, and uniglandular or multiglandular parathyroid tumors.

Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR.
Cellular localization	Nucleus. Concentrated in nuclear body-like structures. Relocates to the nuclear matrix upon gamma irradiation.

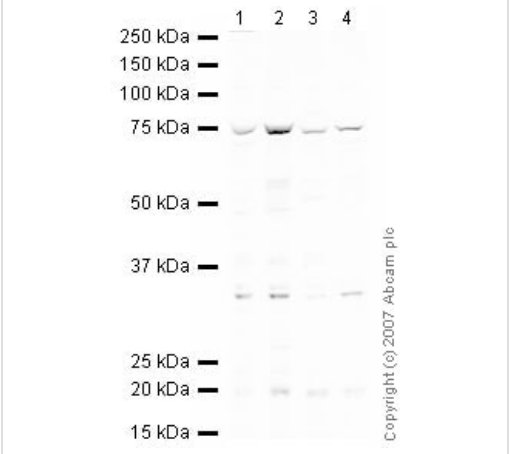
Images



Western blot - Anti-Menin antibody - ChIP Grade (ab31902)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: Menin knockout HAP1 cell lysate (20 µg)
Lane 3: Jurkat cell lysate (20 µg)
Lane 4: A431 cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab31902 observed at 74 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab31902 was shown to recognize Menin when Menin knockout samples were used, along with additional cross-reactive bands. Wild-type and Menin knockout samples were subjected to SDS-PAGE. ab31902 and **ab8245** (loading control to GAPDH) were diluted 1 µg/mL and 1/2000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-Menin antibody - ChIP Grade (ab31902)

All lanes : Anti-Menin antibody - ChIP Grade (ab31902) at 1 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : Jurkat whole cell lysate (**ab7899**)
Lane 3 : A-431 whole cell lysate (**ab7909**)
Lane 4 : HEK-293 whole cell lysate (**ab7902**)

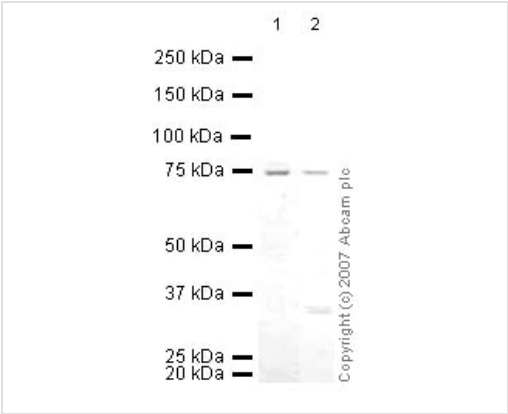
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/15000 dilution

Performed under reducing conditions.

Predicted band size: 68 kDa
Observed band size: 75 kDa

Additional bands at: 31 kDa. We are unsure as to the identity of these extra bands.



Western blot - Anti-Menin antibody - ChIP Grade (ab31902)

All lanes : Anti-Menin antibody - ChIP Grade (ab31902) at 1/250 dilution

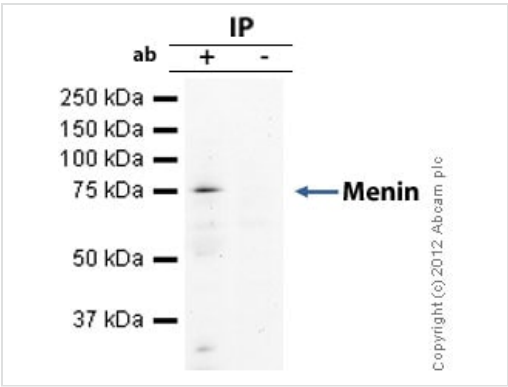
Lane 1 : MEF1 (Mouse embryonic fibroblast cell line) Whole Cell Lysate
Lane 2 : PC12 (Rat adrenal pheochromocytoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

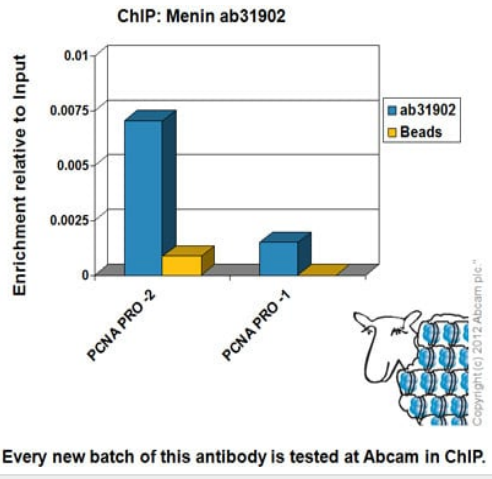
Performed under reducing conditions.

Predicted band size: 68 kDa
Observed band size: 75 kDa



Immunoprecipitation - Anti-Menin antibody - ChIP Grade (ab31902)

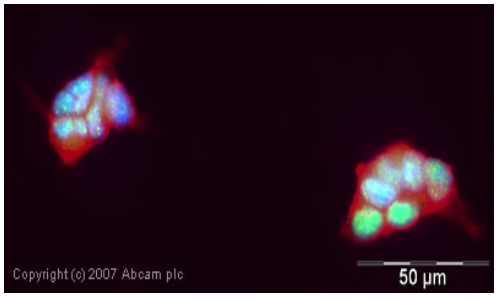
Menin was immunoprecipitated using 0.5mg Hela whole cell extract, 5µg of Rabbit polyclonal to Menin and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).
The antibody was incubated under agitation with Protein G beads for 10min, Hela whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.
Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70^{o}C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab31902.
Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) (**ab99697**).
Band: 75kDa: Menin.



ChIP - Anti-Menin antibody - ChIP Grade (ab31902)

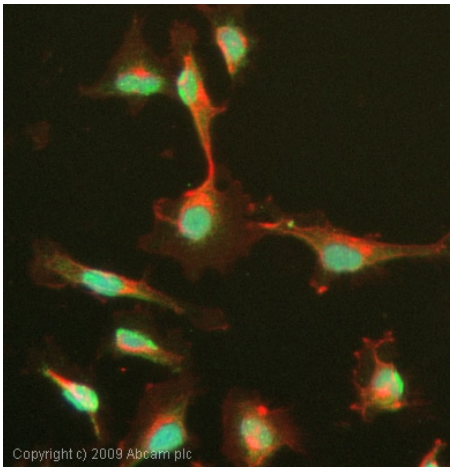
ChIP analysis of Menin along the PCNA promoter. High enrichment at PCNA PRO-2 and weak enrichment at PCNA PRO-1 is observed as previously described in literature.

Chromatin was prepared from HeLa cells according to the Abcam X-ChIP protocol. Cells were fixed with formaldehyde for 10 minutes. The ChIP was performed with 25µg of chromatin, 5µg of ab31902 (blue), and 20µl of Protein A/G sepharose beads. No antibody was added to the beads control (yellow). The immunoprecipitated DNA was quantified by real time PCR (Sybr green approach). Primers are located in the first kb of the transcribed region.



Immunocytochemistry/ Immunofluorescence - Anti-Menin antibody - ChIP Grade (ab31902)

ICC/IF image of ab31902 stained human HEK 293 cells. The cells were PFA fixed (10 min), permabilised in TBS-T (20 min) and incubated with the antibody (ab31902, 1µg/ml) for 1h at room temperature. 1%BSA / 10% normal serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein interactions. 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). DAPI was used to stain the cell nuclei (blue).



Immunocytochemistry/ Immunofluorescence - Anti-Menin antibody - ChIP Grade (ab31902)

ICC/IF image of ab31902 stained MCF7 cells. The cells were 4% PFA 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 (ab31902, 1µg/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.

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