abcam

Product datasheet

Anti-MDC1 antibody ab11169

8 Abreviews 42 References 1 Image

Overview

Product name	Anti-MDC1 antibody
Description	Rabbit polyclonal to MDC1
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Chimpanzee, Rhesus monkey, Gorilla
Immunogen	Synthetic peptide corresponding to Human MDC1 aa 450-550. Database link: **9656**
Positive control	Tested with HeLa cells and HEK 293 cells.
General notes	In response to recent feedback about mouse species we no longer guarantee this anymore. Please do contact our scientific support team for more information. 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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7 Preservative: 0.1% Sodium azide Constituents: 0.021% PBS, 1.764% Sodium citrate, 1.815% Tris
Purity	Immunogen affinity purified
Purification notes	Antibodies were affinity purified using the peptide immobilized on solid support.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab11169 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
ICC/IF	★★★★☆ **(3)**	Use at an assay dependent concentration.
WB	★★★★☆ **(4)**	1/500 - 1/2500. Detects a band of approximately 250 kDa (predicted molecular weight: 220 kDa).

Target

Function Required for checkpoint mediated cell cycle arrest in response to DNA damage within both the S phase and G2/M phases of the cell cycle. May serve as a scaffold for the recruitment of DNA repair and signal transduction proteins to discrete foci of DNA damage marked by 'Ser-139' phosphorylation of histone H2AFX. Also required for downstream events subsequent to the recruitment of these proteins. These include phosphorylation and activation of the ATM, CHEK1/CHK1 and CHEK2/CHK2/CDS1 kinases, and stabilization of TP53 and apoptosis. ATM and CHEK2 may also be activated independently by a parallel pathway mediated by TP53BP1.

Tissue specificity Highly expressed in testis.

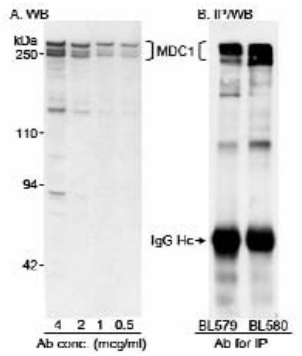
Sequence similarities Contains 2 BRCT domains.
Contains 1 FHA domain.

Domain Tandemly repeated BRCT domains are characteristic of proteins involved in DNA damage signaling. In MDC1, these repeats are required for localization to chromatin which flanks sites of DNA damage marked by 'Ser-139' phosphorylation of H2AFX.

Post-translational modifications Phosphorylated upon exposure to ionizing radiation (IR), ultraviolet radiation (UV), and hydroxyurea (HU). Phosphorylation in response to IR requires ATM, NBN, and possibly CHEK2. Also phosphorylated during the G2/M phase of the cell cycle and during activation of the mitotic spindle checkpoint.

Cellular localization Nucleus. Associated with chromatin. Relocalizes to discrete nuclear foci following DNA damage, this requires 'Ser-139' phosphorylation of H2AFX. Colocalizes with APTX at sites of DNA double-strand breaks.

Images



Western blot - Anti-MDC1 antibody (ab11169)

Samples:

A) Nuclear extract (50 mcg) from HeLa cells. B) Whole cell lysate from HEK 293 cells. *Antibodies:* A) ab11169 used at the indicated concentrations for WB. B) **ab11170** (column labelled BL579) and **ab11171** (column labelled BL580) (a) used at 3.3 mcg/mg lysate for IP followed by WB using ab11169 at 0.1 mcg/ml. *Detection:* Chemiluminescence with exposure times less than 5 min. Samples: A) Nuclear extract (50 mcg) from HeLa cells. B) Whole cell lysate from HEK 293 cells. Antibodies: A) ab11169 used at the indicated concentrations for WB. B) **ab11170** (column labelled BL579) and **ab11171** (column labelled BL580) (a) used at 3.3 mcg/mg lysate for IP followed by WB using ab11169 at 0.1 mcg/ml. Detection: Chemiluminescence with exposure times less than 5 min.

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