

Datasheet: AHP799

Description:	SHEEP ANTI HUMAN MDC1 (aa1883-2089)
Specificity:	MDC1 (aa1883-2089)
Other names:	MEDIATOR OF DNA DAMAGE CHECKPOINT PROTEIN 1
Format:	Serum
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	0.1 ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting	▪			1/2000
Immunofluorescence	▪			1/500

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own systems using appropriate negative/positive controls.

Target Species	Human
Product Form	Serum - liquid
Antiserum Preparation	Antisera to human MDC1 (3838) were raised by repeated immunisations of sheep with highly purified antigen.
Preservative Stabilisers	0.09% Sodium Azide
Immunogen	Recombinant MDC1 BRCT domains (aa 1883 - 2089).

**External Database
Links**

UniProt:

[Q14676](#) [Related reagents](#)

Entrez Gene:

[9656](#) MDC1 [Related reagents](#)

Synonyms

KIAA0170, NFBD1

RRID

AB_323725

Specificity

Sheep anti Human MDC1 antibody recognizes human Mediator of DNA damage checkpoint protein 1, also known as MDC1 or Nuclear factor with BRCT domains 1. MDC1 is a 2089 amino acid, ~250 kDa nuclear protein containing two [BRCT](#) domains and a single [FHA](#) domain. MDC1 is involved in checkpoint mediated cell cycle arrest in response to DNA damage ([UniProt: Q14676](#))

Western Blotting

AHP799 detects 3 bands of approximately 250 kDa in HeLa and 293T cell lysates.

References

1. Goldberg, M. *et al.* (2003) MDC1 is required for the intra-S-phase DNA damage checkpoint. [Nature. 421 \(6926\): 952-6.](#)
2. Lou, Z. *et al.* (2003) MDC1 is coupled to activated CHK2 in mammalian DNA damage response pathways. [Nature. 421 \(6926\): 957-61.](#)
3. Shi, W. *et al.* (2008) Disassembly of MDC1 foci is controlled by ubiquitin-proteasome-dependent degradation. [J Biol Chem. 283: 31608-16.](#)
4. Rai, R. *et al.* (2008) Differential regulation of centrosome integrity by DNA damage response proteins. [Cell Cycle. 7: 2225-33.](#)
5. Ichijima, Y. *et al.* (2011) MDC1 directs chromosome-wide silencing of the sex chromosomes in male germ cells. [Genes Dev. 25: 959-71.](#)
6. Sin, H.S. *et al.* (2012) Human postmeiotic sex chromatin and its impact on sex chromosome evolution. [Genome Res. 22: 827-36.](#)
7. Nakada, S. *et al.* (2008) PP4 is a gamma H2AX phosphatase required for recovery from the DNA damage checkpoint. [EMBO Rep. 9: 1019-26.](#)
8. Nakada, S. *et al.* (2010) Non-canonical inhibition of DNA damage-dependent ubiquitination by OTUB1. [Nature. 466: 941-6.](#)
9. Reichert, S. *et al.* (2011) Survivin inhibition and DNA double-strand break repair: A molecular mechanism to overcome radioresistance in glioblastoma [Radiother Oncol. 101: 51-8.](#)
10. Capalbo, G. *et al.* (2010) Radiation-induced survivin nuclear accumulation is linked to DNA damage repair. [Int J Radiat Oncol Biol Phys. 77 \(1\): 226-34.](#)
11. Cloutier, J.M. *et al.* (2016) Mammalian meiotic silencing exhibits sexually dimorphic features. [Chromosoma. 125 \(2\): 215-26.](#)
12. Kato, Y. *et al.* (2015) FANCB is essential in the male germline and regulates H3K9 methylation on the sex chromosomes during meiosis. [Hum Mol Genet. 24 \(18\): 5234-49.](#)

Further Reading

1. Stewart, G.S. *et al.* (2003) MDC1 is a mediator of the mammalian DNA damage checkpoint. [Nature. 421 \(6926\): 961-6.](#)

Storage Store at +4°C or at -20°C if preferred.
This product should be stored undiluted.
Storage in frost-free freezers is not recommended.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10081 available at:
10081: <https://www.bio-rad-antibodies.com/uploads/MSDS/10081.pdf>

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Sheep IgG (H/L) (5184-2304...) [Biotin](#)

Donkey Anti Sheep IgG (STAR88...) [DyLight®488](#), [HRP](#)

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