abcam

ab16780

Anti-BRCA1 antibody [MS110]

Anti-BRCA1 antibody [MS110] (ab16780) is a mouse monoclonal antibody detecting BRCA1 in **Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human**.

- Over 60 publications
- Trusted since 2005

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	MS110
Purification technique	Affinity purification
Epitope	Within the N-terminal 304 amino acids of BRCA1.
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	5 µg/mL
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Not recommended

Species	Human
Dilution info	-
Notes	Please note that this antibody is not suitable for WB. Despite positive publications and Abreviews we have mixed feedback on this antibody in WB and we do not guarantee ab16780 for WB.

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information BRCA1

Function	E3 ubiquitin-protein ligase that specifically mediates the formation of 'Lys-6'-linked polyubiquitin chains and plays a central role in DNA repair by facilitating cellular responses to DNA damage (PubMed:10500182, PubMed:12887909,

PubMed:12890688, PubMed:14976165, PubMed:16818604, PubMed:17525340, PubMed:19261748). It is unclear whether it also mediates the formation of other types of polyubiquitin chains (PubMed:12890688). The BRCA1-BARD1 heterodimer coordinates a diverse range of cellular pathways such as DNA damage repair, ubiquitination and transcriptional regulation to maintain genomic stability (PubMed:12890688, PubMed:14976165, PubMed:20351172). Regulates centrosomal microtubule nucleation (PubMed:18056443). Required for appropriate cell cycle arrests after ionizing irradiation in both the S-phase and the G2 phase of the cell cycle (PubMed:10724175, PubMed:11836499, PubMed:12183412, PubMed:19261748). Required for FANCD2 targeting to sites of DNA damage (PubMed:12887909). Inhibits lipid synthesis by binding to inactive phosphorylated ACACA and preventing its dephosphorylation (PubMed:16326698). Contributes to homologous recombination repair (HRR) via its direct interaction with PALB2, fine-tunes recombinational repair partly through its modulatory role in the PALB2-dependent loading of BRCA2-RAD51 repair machinery at DNA breaks (PubMed:19369211). Component of the BRCA1-RBBP8 complex which regulates CHEK1 activation and controls cell cycle G2/M checkpoints on DNA damage via BRCA1-mediated ubiquitination of RBBP8 (PubMed:16818604). Acts as a transcriptional activator (PubMed:20160719).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-BRCA1 antibody [MS110] (ab16780) is a mouse monoclonal antibody and is validated for use in Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human samples.

Trusted by the scientific community
Anti-BRCA1 [MS110] (ab16780) was first used in a scientific publication in 2005 and has been cited over 60 times in peer-reviewed journals.

Reviewed by scientists
Anti-BRCA1 [MS110] (ab16780) has over 10 independent reviews from customers.

Other related products
We have a range of other formats of antibody clone [MS110] also available for your convenience: ab16780, Carrier free - ab264518

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

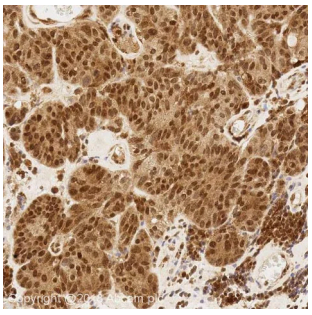
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

8 product images



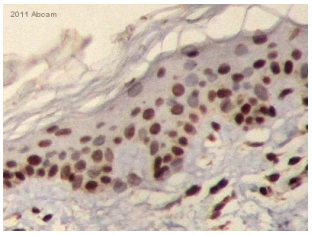
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BRCA1 antibody [MS110] (ab16780)

BRCA1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-BRCA1 antibody

IHC image of ab16780 staining in normal human breast 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 ab16780, 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.
* *Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre.*

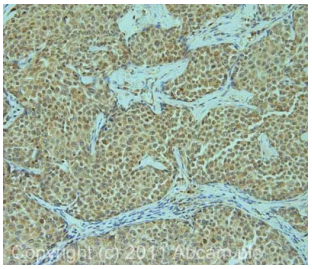


This image is courtesy of an Anonymous customer review.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BRCA1 antibody [MS110] (ab16780)

BRCA1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-BRCA1 antibody

ab16780 staining BRCA1 in human skin tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded tissue sections). The sections were fixed in formaldehyde and subjected to heat-mediated antigen retrieval in citrate buffer (pH 6.0) prior to blocking with 2% BSA for 1 hour at 22°C. The primary antibody was diluted 1/50 and incubated with the sample for 20 hours at 4°C. A biotin-conjugated goat anti-mouse polyclonal was used as the secondary antibody, diluted 1/800. Antibody was detected by DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BRCA1 antibody [MS110] (ab16780)

BRCA1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-BRCA1 antibody

IHC image of ab16780 staining in human breast carcinoma 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 ab16780, 5µg/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.

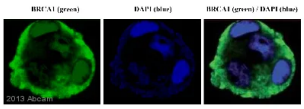


Image is courtesy of an anonymous customer review

Immunocytochemistry/ Immunofluorescence - Anti-BRCA1 antibody [MS110] (ab16780)

BRCA1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-BRCA1 antibody

ab16780 staining BRAC1 in human colon cancer cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.3% Triton X-100 and blocked with 3% BSA for 30 minutes at 4°C. Samples were incubated with primary antibody (1/200) for 12 hours at 4°C. An Alexa Fluor® 488-conjugated Goat anti-mouse IgG (H+L) polyclonal (1/1000) was used as the secondary antibody.

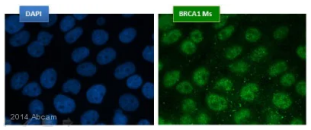
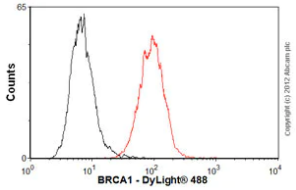


Image is courtesy of an anonymous customer review

Immunocytochemistry/ Immunofluorescence - Anti-BRCA1 antibody [MS110] (ab16780)

BRCA1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-BRCA1 antibody

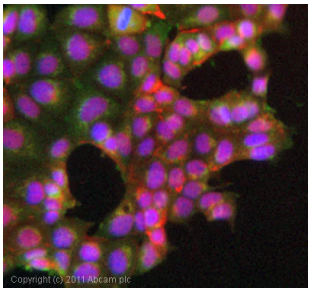
ab16780 staining BRAC1 in human ovarian tumor cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with Acetone:Methanol and blocked with a protein block, serum-free for 1 hour at 18°C. Samples were incubated with primary antibody (1/100) for 14 hours at 4°C. An Alexa Fluor® 488-conjugated Rabbit anti-mouse IgG (H+L) polyclonal (1/400) was used as the secondary antibody.



Flow Cytometry (Intracellular) - Anti-BRCA1 antibody [MS110] (ab16780)

BRCA1 Flow Cytometry (Intracellular) staining using mouse Anti-BRCA1 antibody

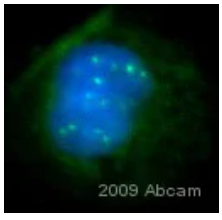
Overlay histogram showing MCF7 cells stained with ab16780 (red line). The cells were fixed with 80% methanol (5 minutes) and then permeabilized with 0.1% PBS-Tween for 20 minutes. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab16780, 1 µg/1x10^6 cells) for 30 minutes at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 minutes at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2 µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in MCF7 cells fixed with 4% paraformaldehyde (10 minutes)/permeabilized with 0.1% PBS-Tween for 20 minutes used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Anti-BRCA1 antibody [MS110] (ab16780)

BRCA1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-BRCA1 antibody

ICC/IF image of ab16780 stained MCF7 cells. The cells were 4% PFA fixed (10 minutes) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1 hour to permeabilize the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab16780, 5 µg/ml) overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti-mouse IgG - H&L, pre-adsorbed (ab96879) used at a 1/250 dilution for 1 hour. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1 hour. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43 µM.



This image is courtesy of a customer review submitted by Dr Alejandro Vazquez-Martin

Immunocytochemistry/ Immunofluorescence - Anti-BRCA1 antibody [MS110] (ab16780)

BRCA1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-BRCA1 antibody

ab16780 staining BRCA1 in human A431 epidermoid cancer cells by ICC/IF (immunocytochemistry/immunofluorescence). Cells were formaldehyde fixed, permeabilized by Triton X-100 and blocked 5% BSA for 30 minutes at room temperature. The sample was incubated with the primary antibody (1/50 in BSA) for 1 hour. An Alexa Fluor 488®-conjugated Goat anti-mouse polyclonal (1/50) was used as the secondary.

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