abcam

Product datasheet

Anti-MPG antibody ab55461

KO VALIDATED

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Overview

Product name	Anti-MPG antibody
Description	Mouse monoclonal to MPG
Host species	Mouse
Tested applications	**Suitable for:** WB, IHC-P, Flow Cyt
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment: MPARSGAQFC RRMGQKKQRP ARAGQPHSSS DAAQAPAEQP HSSSDAAQAP CPRERCLGPP TTPGPYRSIY FSSPKGHLTR LGLEFFDQPA , corresponding to amino acids 1-90 of Human MPG Run BLAST with ExPASy Run BLAST with NCBI

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: None PBS, pH 7.2
Purity	Protein G purified
Clonality	Monoclonal
Isotype	IgG2a
Light chain type	kappa

Applications

Our Abpromise guarantee covers the use of **ab55461** in the following tested applications.

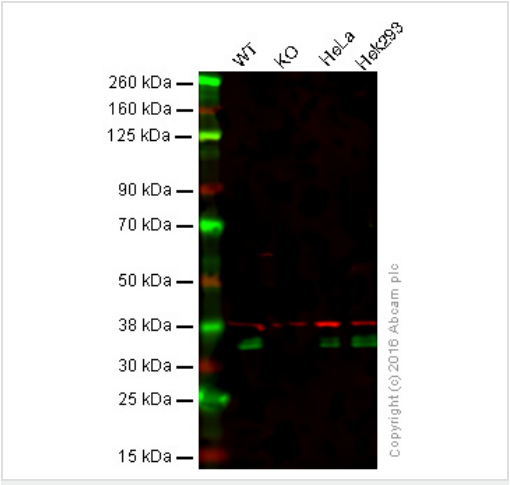
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 - 5 µg/ml. Predicted molecular weight: 33 kDa.
IHC-P		Use a concentration of 3 µg/ml.
Flow Cyt		Use 1µg for 10^6 cells. ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Target

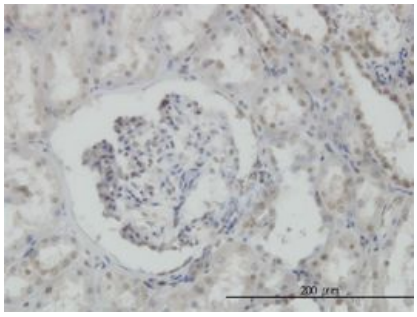
Function	Hydrolysis of the deoxyribose N-glycosidic bond to excise 3-methyladenine, and 7-methylguanine from the damaged DNA polymer formed by alkylation lesions.
Sequence similarities	Belongs to the DNA glycosylase MPG family.
Cellular localization	Nucleus.

Images



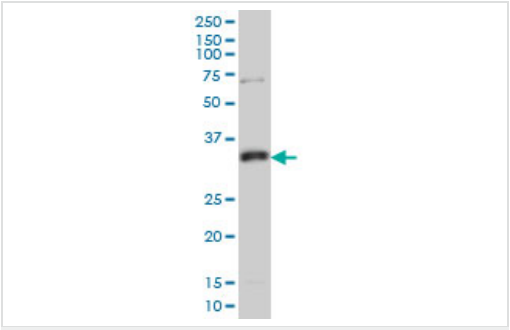
Western blot - Anti-MPG antibody (ab55461)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: MPG knockout HAP1 cell lysate (20 µg)
Lane 3: HeLa cell lysate (20 µg)
Lane 4: HEK293 cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab55461 observed at 35 kDa. Red - loading control, ab181602, observed at 37 kDa.
ab55461 was shown to specifically react with MPG when MPG knockout samples were used. Wild-type and MPG knockout samples were subjected to SDS-PAGE. ab55461 and ab181602 (loading control to GAPDH) were diluted 1 µg/mL and 1/10 000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed ab216772 and Goat Anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed ab216777 secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



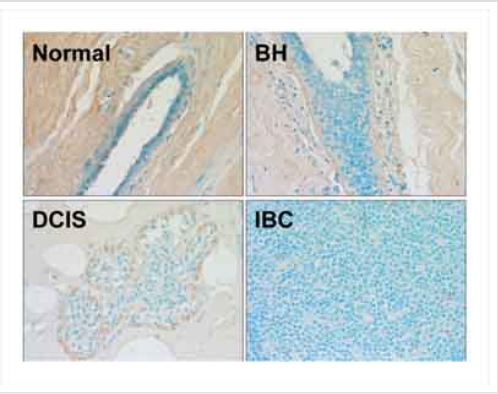
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MPG antibody (ab55461)

MPG antibody (ab55461) used in immunohistochemistry at 3ug/ml on formalin fixed and paraffin embedded human kidney.



Western blot - Anti-MPG antibody (ab55461)

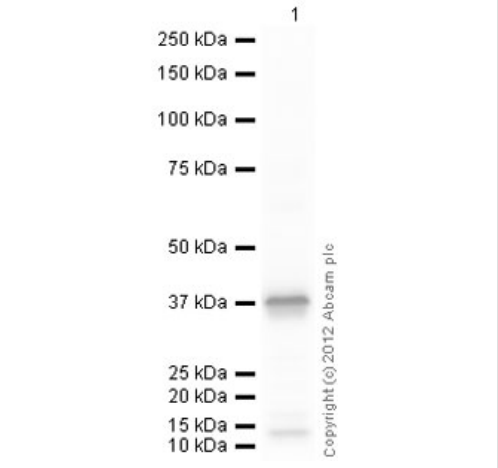
MPG antibody (ab55461) at 1ug/lane + HeLa cell lysate at 25ug/lane.



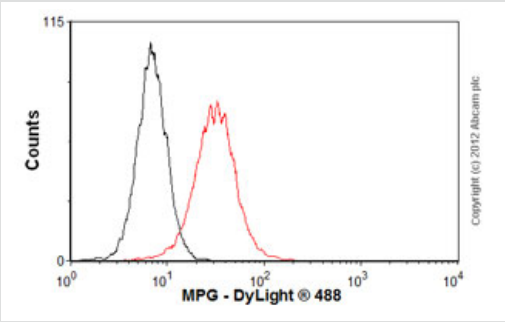
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MPG antibody (ab55461)

Image from Dr CD Curtis et al, BMC Cancer. 2010 Jan 11;10:9, Fig 9.

ab55461 staining MPG in human mammary tissue by Immunohistochemistry (paraffin embedded sections).
Paraffin-embedded blocks were sectioned and mounted on frost-free slides. The 3-10 µm sections were deparaffinized in xylene and rehydrated through a series of graded alcohols. Slides were washed with 1× PBS and endogenous peroxidases were blocked with 1.5% hydrogen peroxide in 1× PBS for 20 minutes at 25°C. After three 5 minutes washes in 1× PBS, slides were incubated in blocking solution (1× PBS with 0.1% Triton X-100, 3% bovine serum albumin) with 5% normal donkey serum for 10 minutes at 25°C. Control (no primary antibody) and experimental slides were incubated overnight at 4°C, respectively, in blocking solution alone or blocking solution with ab55461 at 1/600 dilution. Biotin-conjugated secondary antibody 1/200 was added and slides were incubated at 25°C for 30 minutes and then washed three times with 1× PBS. The ABC Peroxidase Staining kit (1:100 dilution of each Reagent A

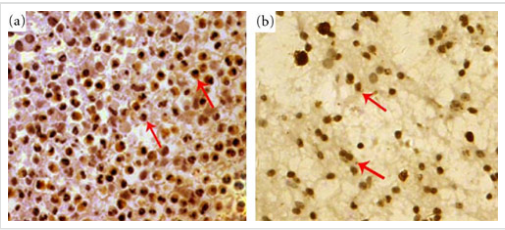


Western blot - Anti-MPG antibody (ab55461)



Flow Cytometry - Anti-MPG antibody (ab55461)

Overlay histogram showing HeLa cells stained with ab55461 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. 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 (ab55461, 1/100 dilution) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MPG antibody (ab55461)

Image from Liu C et al., J Biomed Biotechnol. 2012;2012:760679. Epub 2012 Feb 27. Fig 4.; doi:10.1155/2012/760679; 18 January 2012, Journal of Biomedicine and Biotechnology, Volume 2012 (2012), Article ID 760679

Immunohistochemical analysis of Human gliomas, staining MPG with ab55461.

Formalin fixed, paraffin-embedded tissue was blocked with 5% normal horse serum and incubated with primary antibody (1/500) overnight at 4°C. Staining was detected using DAB.

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