abcam

ab155092

Anti-MPG/AAG antibody [EPR10959(B)]

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Tissue culture supernatant, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR10959(B)
Purification technique	Affinity purification Protein A
Concentration	0.139 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Expected

Species	Mouse
Dilution info	1/50 - 1/100
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Expected

Species	Mouse
Dilution info	1/10000 - 1/50000
Notes	-

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information MPG

Function	Hydrolysis of the deoxyribose N-glycosidic bond to excise 3-methyladenine, and 7-methylguanine from the damaged DNA polymer formed by alkylation lesions.

Storage

Shipped at conditions	Conditional Ambient
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

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	MPG also known as AAG or 3-methyladenine DNA glycosylase is a DNA repair protein with a molecular mass of approximately 33 kDa. It predominately acts to recognize and excise damaged bases from DNA playing a vital role in base excision repair (BER) mechanism. MPG/AAG is found in several tissues with high expression observed in liver and brain suggesting its importance in maintaining genomic stability in these areas.
Biological function summary	The MPG/AAG protein serves an essential function in cellular defense against genotoxic stress. It initiates the repair process by removing alkylated adenine and other modified bases from DNA. Although not directly identified as a part of any large protein complex MPG/AAG collaborates with other enzymatic components of BER such as DNA polymerase and ligase enzymes to facilitate complete and accurate DNA repair.
Pathways	MPG/AAG engages largely in the base excision repair pathway to correct single-base damage not addressed by nucleotide excision repair. Additionally its function ties into the cellular response to DNA alkylation a critical pathway concerning the maintenance of genomic integrity. MPG/AAG is often associated with DNA polymerase beta as a partner in extending and sealing the repaired strand ensuring the completion of the BER pathway.
Associated diseases and disorders	The activity of MPG/AAG relates closely to cancer and neurodegenerative diseases. Alterations in MPG/AAG function have been linked to increased susceptibility to alkylation-induced tumorigenesis. Additionally impaired function can contribute to neuronal damage associating it with proteins involved in neurodegenerative processes such as Tau. These connections highlight the importance of MPG/AAG in both the initiation and progression of specific human diseases.

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

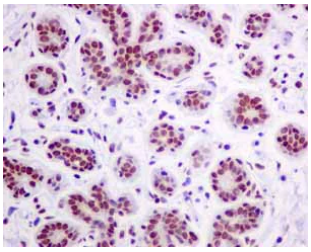
We do not recommend this combination. It is not covered by our product promise.

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.

9 product images

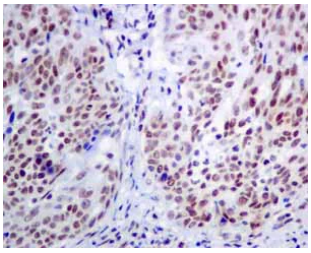


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MPG/AAG antibody [EPR10959(B)] (ab155092)

MPG/AAG Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MPG/AAG antibody

Immunohistochemical analysis of paraffin embedded Human normal breast tissue using ab155092 showing +ve staining.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

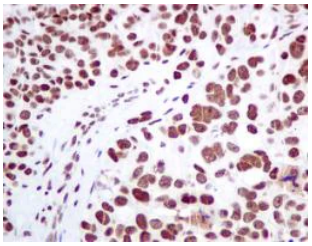


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MPG/AAG Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MPG/AAG antibody

Immunohistochemical analysis of paraffin embedded Human cervical carcinoma tissue using ab155092 showing +ve staining.

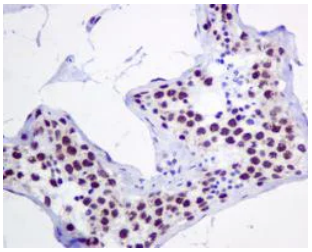
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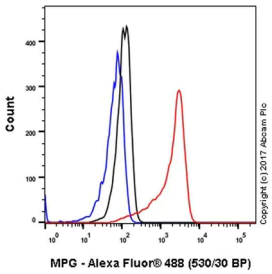
Immunohistochemical analysis of paraffin-embedded Human ovarian carcinoma tissue labeling MPG/AAG with ab155092 at 1/50 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MPG/AAG antibody [EPR10959(B)] (ab155092)

MPG/AAG Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MPG/AAG antibody

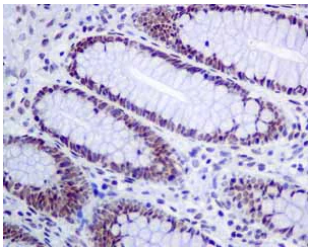
Immunohistochemical analysis of paraffin-embedded Human tesis tissue labeling MPG/AAG with ab155092 at 1/50 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-MPG/AAG antibody [EPR10959(B)] (ab155092)

MPG/AAG Flow Cytometry (Intracellular) staining using rabbit Anti-MPG/AAG antibody

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling MPG/AAG with unpurified ab155092 at 1/20 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) (ab172730) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.

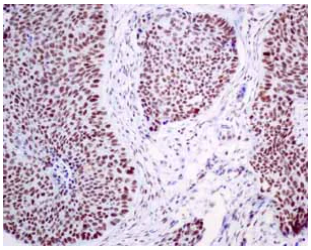


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MPG/AAG antibody [EPR10959(B)] (ab155092)

MPG/AAG Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MPG/AAG antibody

Immunohistochemical analysis of paraffin embedded Human normal colon tissue using ab155092 showing +ve staining.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

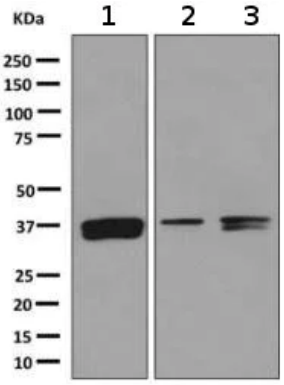


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MPG/AAG antibody [EPR10959(B)] (ab155092)

MPG/AAG Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MPG/AAG antibody

Immunohistochemical analysis of paraffin embedded Human lung adenocarcinoma tissue using ab155092 showing +ve staining.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-MPG/AAG antibody [EPR10959(B)] (ab155092)

All lanes:
Western blot - Anti-MPG/AAG antibody [EPR10959(B)] (ab155092) at 1/10000 dilution

Lane 1:
HeLa cell lysate at 10 µg

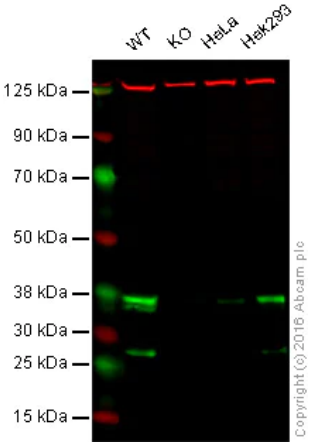
Lane 2:
293T cell lysate at 10 µg

Lane 3:
Jurkat cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 33 kDa



Western blot - Anti-MPG/AAG antibody [EPR10959(B)] (ab155092)

MPG/AAG Western blot staining using rabbit Anti-MPG/AAG antibody

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: MPG/AAG 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 - ab155092 observed at 35 kDa. Red - loading control, ab8245.
ab155092 was shown to specifically react with MPG/AAG when MPG/AAG knockout samples were used. Wild-type and MPG/AAG knockout samples were subjected to SDS-PAGE. ab155092 and ab8245 (loading control to GAPDH) were diluted at 1/10,000 and 1/10,000 dilution respectively and incubated overnight at 4C. Blots were developed with IRDye® 800CW Goat anti-Rabbit IgG (H + L) and IRDye® 680 Goat anti-Mouse IgG (H + L) secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-MPG/AAG antibody [EPR10959(B)] (ab155092)

Predicted band size: 33 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.