Product Datasheet

MGMT Antibody (MT 3.1)
NB100-692-0.25ml

Unit Size: 0.25 ml

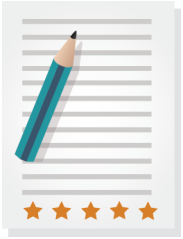
Store at 4C.

www.novusbio.com technical@novusbio.com

Publications: 8

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB100-692

Updated 9/9/2025 v.20.1



NB100-692-0.25ml

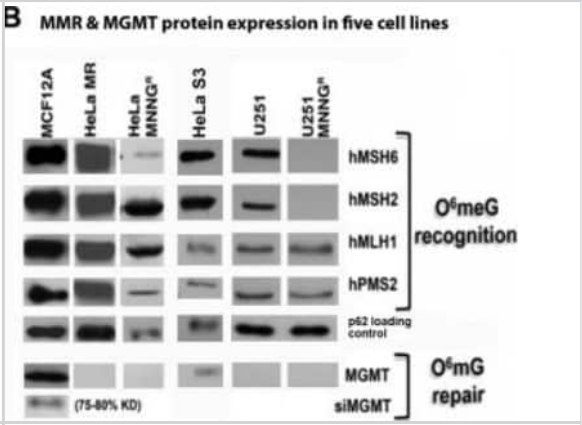
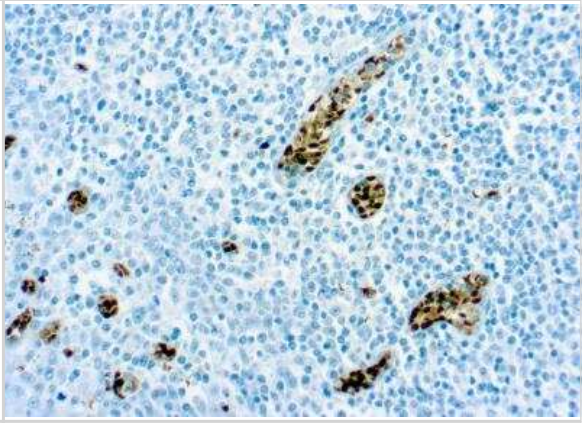
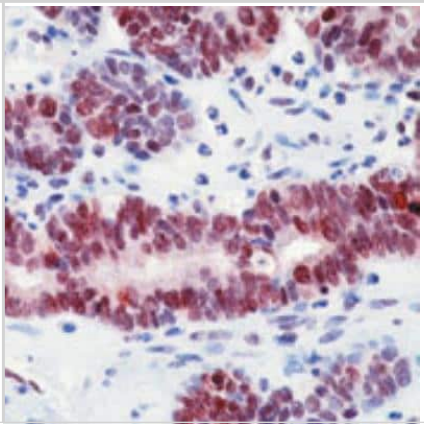
MGMT Antibody (MT 3.1)

Product Information	
Unit Size	0.25 ml
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C.
Clonality	Monoclonal
Clone	MT 3.1
Preservative	0.05% Sodium Azide
Isotype	IgG1
Purity	Protein G purified
Buffer	PBS (pH 7.4), 0.2% BSA, Tween-20

Product Description	
Description	Novus Biologicals Mouse MGMT Antibody (MT 3.1) (NB100-692) is a monoclonal antibody validated for use in IHC and WB. Anti-MGMT Antibody: Cited in 8 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	4255
Gene Symbol	MGMT
Species	Human
Reactivity Notes	Not yet tested in other species.
Specificity/Sensitivity	This stains all mantle zone lymphocytes and 50% of germinal center lymphocytes. Basaloid epithelial cells of tonsil squamous mucosa were also stained positive with this.
Immunogen	Recombinant human MGMT protein.

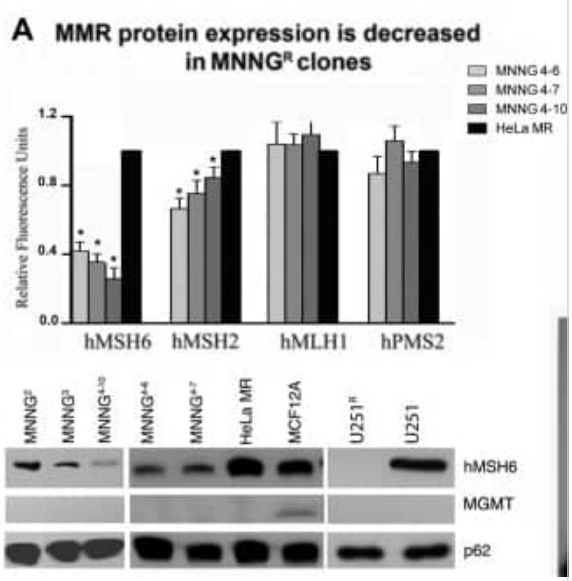
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunohistochemistry
Recommended Dilutions	Western Blot 1:100-1:2000, Immunohistochemistry 1:25-1:50, Immunohistochemistry-Paraffin 1:25-1:50
Application Notes	IHC-P: recommended pretreatment of citrate buffer, pH 6.0. Recommended incubation time of 30 min at RT. Use in western blot reported in scientific literature (PMID 24019948).

Images

Western Blot: MGMT Antibody (MT 3.1) [NB100-692] - Hydrolysis of MNNG & TMZ to active cation and deficient MMR & MGMT protein expression in cancer cells results in increased colony survival after MNNG exposure. MMR & MGMT protein expression in six cell lines by SDS PAGE and immunoblot. Image collected and cropped by CiteAb from the following publication (//dx.plos.org/10.1371/journal.pone.0074071) licensed under a CC-BY license.	
Immunohistochemistry-Paraffin: MGMT Antibody (MT 3.1) [NB100-692] - Formalin fixed paraffin embedded human tonsil stained with MGMT antibody.	
Immunohistochemistry-Paraffin: MGMT Antibody (MT 3.1) [NB100-692] - Formalin-fixed, paraffin-embedded human colon carcinoma stained with MGMT MT 3.1 (Cat. #NB 100-692) using peroxidase-conjugate and AEC chromogen. Note nuclear staining of tumor cells.	

Western Blot: MGMT Antibody (MT 3.1) [NB100-692] - MMR protein expression & hMutSα activity decreases while hprt mutation rates & MNNG resistance increases in MGMT & MMR negative subclones after repeated exposure to MNNG.A. MMR protein expression, each fluorescent protein band was measured against a loading control (p62) in the same lane by Alpha Innotech Fluorochem HD2, histograms produced by Prism GraphPad software, error bars indicate SD. U251 not represented in histogram because hMSH6 & hMSH2 expression is completely absent (Figure 1). Asterisks (*) denote statistically significant differences at P < 0.05 between each subclone protein expression & HeLa MR for the designated MMR protein. Statistical significance determined by student t-test using Prism GraphPad software. Each experiment was performed a minimum of 3 times. B. hMutSα binding activity of equal nuclear protein concentration from nuclear extracts of each cell line by EMSA using [32P]-69mer oligomers with either G:T or 06meG:T located in the center. C. hprt mutation rates in two sequentially isolated HeLa MNNGR clones as compared to HeLa MR. D. Classic colony survival of HeLa MNNG4 & U251R subclones indicates significant resistance to 0.2 µM MNNG as compared to HeLa MR & U251 parental cell lines. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/24019948), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Figure 2



Publications

Ishida A, Kaneko K, Minamimoto R et al. Clinical decision-making based on 11C-methionine PET in recurrent Cushings disease with equivocal MRI findings Journal of Neurosurgery 2023-06-01 [PMID: 37410630]

Ishida A, Shichi H, Fukuoka H Et al. Efficacy of temozolomide combined with capecitabine (CAPTEM) on refractory prolactinomas as assessed using an ex vivo 3D spheroid assay Pituitary 2021-11-13 [PMID: 34773564]

Rabe M, Dumont S, Alvarez-Arenas A et al. Identification of a transient state during the acquisition of temozolomide resistance in glioblastoma Cell Death Dis 2020-01-06 [PMID: 31907355] (WB, Human)

Palmieri D, Duchnowska R, Woditschka S et al. Profound prevention of experimental brain metastases of breast cancer by temozolomide in an MGMT-dependent manner. Clin. Cancer Res. 2014-03-14 [PMID: 24634373] (IHC-P, WB, Human)

Details:
IHC (P): mouse brain (Fig 1E), human primary breast tumors and brain metastases (Fig 4, Tables 1,2,S1). Nuclear staining was considered positive. Tonsil tissue was used as a positive control. WB: cell lines transfected with human MGMT (Figs 1B, S2C. The s

Gupte M, Tuck AN, Sharma VP, Williams KJ. Major Differences between Tumor and Normal Human Cell Fates after Exposure to Chemotherapeutic Monofunctional Alkylator. PLoS One. 2013-09-03 [PMID: 24019948] (WB, Human)

Zuhur SS, Tanik C, Karaman O et al. MGMT immunoexpression in growth hormone-secreting pituitary adenomas and its correlation with Ki-67 labeling index and cytokeratin distribution pattern Endocrine 2011-10-01 [PMID: 21792693] (IF/IHC, Human)

Takeshita A, Inoshita N, Taguchi M et al. High incidence of low O6-methylguanine DNA methyltransferase expression in invasive macroadenomas of Cushing's disease. Eur J Endocrinol;161(4):553-559. 2009-01-01 [PMID: 19589911]

Zuhur SS, Musluman AM, Tan?k C, Karaman O, Ozturk FY, Ozderya A, Ozkayalar H, Ayd?n Y, Altunta? Y. MGMT immunoexpression in adamantinomatous craniopharyngiomas. Pituitary;14(4):323-7. 2011-12-01 [PMID: 21318329] (IF/IHC, Human)

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Products Related to NB100-692-0.25ml

NB820-59272	Human Tonsil Whole Tissue Lysate (Adult Whole Normal)
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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