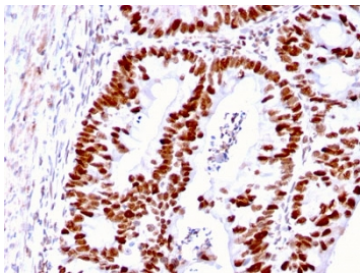
MSH6 Antibody / DNA Mismatch Repair Protein Antibody [clone MSH6/3085] (V7417)

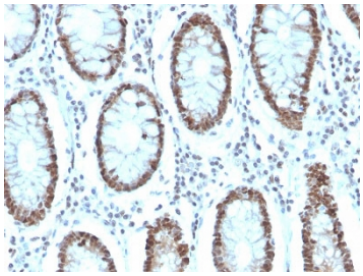
Catalog No.	Formulation	Size
V7417-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7417-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7417SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7417IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

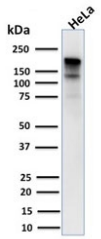
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	MSH6/3085
Purity	Protein G affinity chromatography
UniProt	P52701
Localization	Nuclear
Applications	ELISA: order BSA/sodium azide-free format for coating Immunofluorescence: 1-2ug/ml Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This MSH6 Antibody / DNA Mismatch Repair Protein Antibody is available for research use only.



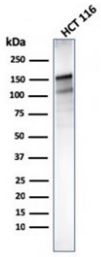
MSH6 Antibody in Human Colon Carcinoma IHC. Immunohistochemistry testing of MSH6 Antibody / DNA Mismatch Repair Protein Antibody in FFPE human colon carcinoma tissue. Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA, pH 9, for 10-20 min followed by cooling prior to staining. This MSH6 Antibody demonstrates nuclear detection of the DNA mismatch repair protein in human colon tumor tissue



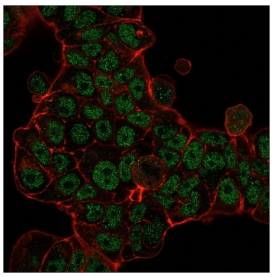
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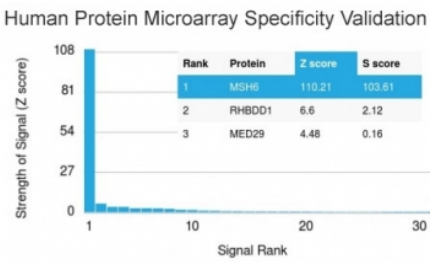
MSH6 Antibody in Human HeLa Cervical Cancer Cells WB. Western blot testing of MSH6 Antibody / DNA Mismatch Repair Protein Antibody in human HeLa cervical cancer cell lysate. A prominent high-molecular-weight band is detected within the expected range of approximately 120-160 kDa for MSH6. This MSH6 Antibody demonstrates detection of the DNA mismatch repair protein in human HeLa cells.



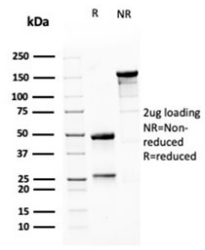
MSH6 Antibody in Human HCT-116 Colorectal Cancer Cells WB. Western blot testing of MSH6 Antibody / DNA Mismatch Repair Protein Antibody in human HCT-116 colorectal cancer cell lysate. A prominent band is detected near the predicted molecular weight of approximately 160 kDa for MSH6. This MSH6 Antibody demonstrates detection of the mismatch repair protein in human colorectal cancer cells.



MSH6 Antibody in Human MCF7 Breast Cancer Cells IF. Immunofluorescence testing of MSH6 Antibody / DNA Mismatch Repair Protein Antibody in permeabilized human MCF7 breast cancer cells. MSH6 antibody staining is shown in green and phalloidin staining of filamentous actin is shown in red. This MSH6 Antibody demonstrates nuclear detection consistent with the established subcellular localization of MSH6.



MSH6 Antibody Protein Microarray Validation. Protein microarray analysis of MSH6 Antibody / DNA Mismatch Repair Protein Antibody using a HuProt microarray containing more than 19,000 full-length human proteins. Z-scores represent antibody-binding signal strength in standard deviations above the mean signal across the array, while the S-score represents the difference between the highest and next-highest Z-scores and provides a measure of relative target specificity. This analysis evaluates the binding specificity of clone MSH6/3085 across the human proteome.



MSH6 Antibody Purity Analysis by SDS-PAGE. Electrophoretic analysis of purified, BSA-free MSH6 Antibody / DNA Mismatch Repair Protein Antibody to evaluate antibody purity and integrity. The observed antibody protein pattern supports the integrity and purity of the MSH6/3085 monoclonal antibody preparation.

Description

MSH6 Antibody / DNA Mismatch Repair Protein Antibody recognizes MSH6, a nuclear protein that plays a central role in the DNA mismatch repair pathway. MSH6 forms a heterodimer with MSH2 known as MutSalpha, which recognizes base-base mismatches and small insertion/deletion loops generated during DNA replication. Recognition of these errors initiates a coordinated repair process that helps maintain genomic integrity and prevents the accumulation of mutations.

MSH6, historically known as GTBP or G/T mismatch-binding protein, contains domains involved in mismatch recognition, DNA binding and ATP-dependent signaling during repair. Following recognition of damaged or incorrectly paired DNA, the MSH2-MSH6 complex recruits additional mismatch repair factors that remove the error-containing DNA strand and promote accurate resynthesis. Through this activity, MSH6 contributes to replication fidelity, mutation suppression and maintenance of microsatellite stability.

Loss or impairment of MSH6 function can produce mismatch repair deficiency and microsatellite instability, making the protein particularly important in cancer research. Germline pathogenic variants in MSH6 are associated with Lynch syndrome, also historically called hereditary nonpolyposis colorectal cancer, and increase susceptibility to colorectal, endometrial and other cancers. Somatic alterations or loss of MSH6 expression can also occur in tumors. MSH6 is consequently studied alongside other mismatch repair proteins such as MSH2, MLH1 and PMS2 in research examining genomic instability, tumor development and responses to therapy.

Clone MSH6/3085 is a mouse monoclonal antibody generated against amino acids 374-540 of human MSH6 and purified by Protein G affinity chromatography. The antibody has also been evaluated on a HuProt protein microarray containing more than 19,000 full-length human proteins. NSJ Bioreagents provides this MSH6 Antibody for research into DNA repair, genomic stability and cancer biology. A DNA Mismatch Repair Protein Antibody targeting MSH6 can support investigation of mismatch recognition and the molecular mechanisms responsible for maintaining genome integrity.

Explore our Cancer Marker Antibodies page for additional reagents targeting proteins involved in DNA repair, genomic instability and cancer-related molecular pathways.

Application Notes

Optimal dilution of the MSH6 Antibody / DNA Mismatch Repair Protein Antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

A portion of amino acids 374-540 from the human protein were used as the immunogen for this MSH6 antibody.

Storage

Store the MSH6 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

MSH6 antibody, DNA mismatch repair protein Msh6 antibody, GTBP antibody, GT mismatch-binding protein antibody, p160 antibody

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