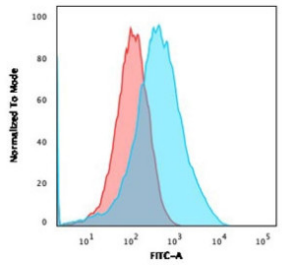
MSH6 Antibody for FACS / MutS homolog 6 flow cytometry antibody [clone MSH6/3086] (V7566)

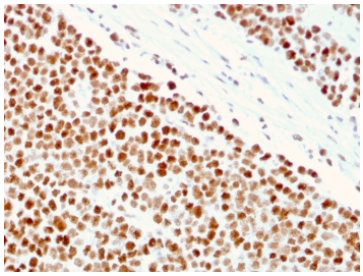
Catalog No.	Formulation	Size
V7566-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7566-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7566SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7566IHC-7ML	Prediluted 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

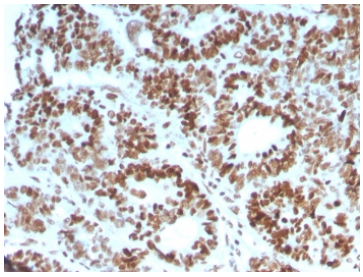
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	MSH6/3086
Purity	Protein G affinity chromatography
UniProt	P52701
Localization	Nucleus
Applications	ELISA (order BSA/sodium azide-free format for coating) Flow cytometry: 1-2ug/million cells Immunofluorescence: 1-2ug/ml Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This MSH6 antibody is available for research use only.



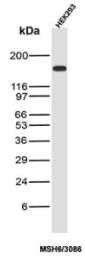
MSH6 Antibody for FACS analysis of fixed and permeabilized human MCF-7 cells. Flow cytometry demonstrates a rightward fluorescence shift in the cell population stained with the mouse monoclonal MSH6 antibody (clone MSH6/3086) compared to the isotype control, indicating detection of intracellular MutS homolog 6 (MSH6), a nuclear DNA mismatch repair protein. Red histogram represents the isotype control and blue histogram represents cells stained with the MSH6 antibody.



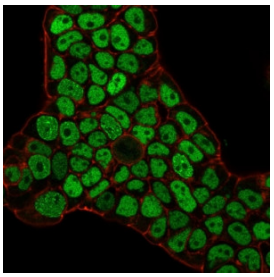
IHC staining of FFPE human small intestine with MSH6 antibody (clone MSH6/3086). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



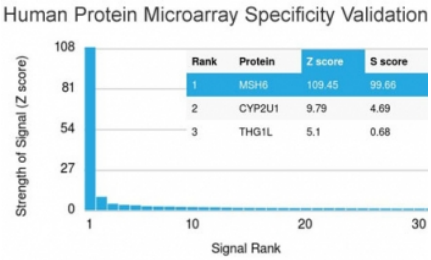
IHC staining of FFPE human colon carcinoma with MSH6 antibody (clone MSH6/3086). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min and allow to cool before testing.



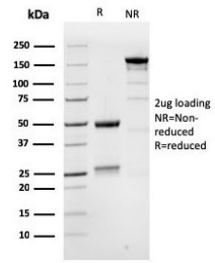
MSH6 Antibody MSH6/3086 in Human HEK293 Cells WB. Western blot testing of MSH6 Antibody, clone MSH6/3086, in human HEK293 cell lysate. A prominent band is detected at approximately 160 kDa, consistent with the predicted molecular weight of MSH6. This MSH6 Antibody demonstrates detection of the DNA mismatch repair protein in human HEK293 cells.



MSH6 antibody immunofluorescence staining of PFA-fixed human MCF-7 cells with clone MSH6/3086 (green) and Phalloidin (red).



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using MSH6 antibody (clone MSH6/3086). These results demonstrate the foremost specificity of the MSH6/3086 mAb.
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



SDS-PAGE analysis of purified, BSA-free MSH6 antibody (clone MSH6/3086) as confirmation of integrity and purity.

Description

MutS homolog 6 (MSH6) is a nuclear DNA mismatch repair protein encoded by the MSH6 gene and functions as a core component of the MutSalpha complex together with MSH2. This heterodimer recognizes base-base mismatches and small insertion-deletion loops that arise during DNA replication, initiating downstream repair events that preserve genomic stability. MSH6 plays an essential role in maintaining DNA fidelity in proliferating cells, particularly within rapidly dividing epithelial and hematopoietic tissues. Because of its critical involvement in mismatch repair, loss or mutation of MSH6 contributes to microsatellite instability and has been implicated in several hereditary and sporadic cancers, including colorectal and endometrial carcinomas associated with Lynch syndrome.

MSH6 Antibody for FACS is used to evaluate expression of this mismatch repair protein in individual cells using flow cytometry. In flow cytometric assays, antibodies directed against nuclear proteins such as MSH6 are typically applied following cell fixation and permeabilization, enabling antibody access to intracellular targets while preserving cell morphology. Detection of MSH6 expression by flow cytometry allows researchers to measure protein abundance across heterogeneous cell populations, enabling rapid quantitative analysis of mismatch repair protein expression at the single-cell level. This approach is particularly useful when studying tumor cell populations, immune cell subsets, or cultured cell lines where DNA repair status may vary among individual cells.

In the context of DNA mismatch repair biology, MSH6 interacts directly with MSH2 to form the MutSalpha complex, which recognizes mismatched nucleotides and recruits additional repair factors including MLH1 and PMS2 to initiate excision and resynthesis of the affected DNA strand. Disruption of this pathway leads to accumulation of replication errors and genomic instability, a hallmark of many cancers. Because MSH6 expression is normally localized within the nucleus, flow cytometric analysis often reveals strong intracellular staining patterns in permeabilized cells, reflecting the protein's role in monitoring DNA integrity during replication and cell division.

MSH6 antibody reagents are frequently used in studies investigating mismatch repair deficiency, tumor biology, and mechanisms of genomic maintenance. Flow cytometry-based detection of MSH6 can complement immunohistochemistry or western blot analysis by providing rapid, quantitative measurement of protein expression across thousands of cells within a sample. This capability is particularly valuable when examining tumor heterogeneity, monitoring DNA repair pathway activity, or assessing experimental perturbations that influence mismatch repair protein expression. Clone MSH6/3086 is a mouse monoclonal antibody that recognizes MutS homolog 6 and has been validated using protein microarray analysis to confirm target specificity. Such validation approaches help ensure that antibodies used in flow cytometry experiments selectively bind their intended antigen, supporting accurate interpretation of cellular protein expression patterns.

For a protein microarray-validated reagent and additional information on mismatch repair and genomic stability, visit our MSH6 Antibody / DNA Mismatch Repair Protein Antibody page.

Application Notes

Optimal dilution of the MSH6 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 recombinant human MSH6 protein fragment within amino acids 374-540 was used as the immunogen for the MSH6 antibody.

Storage

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

Alternate Names

GTBP antibody, G/T mismatch-binding protein antibody, MutS homolog 6 protein antibody

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