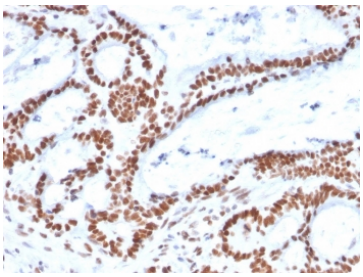
MSH2 Antibody for Immunofluorescence / MSH2 IF Antibody [clone MSH2/2622] (V7964)

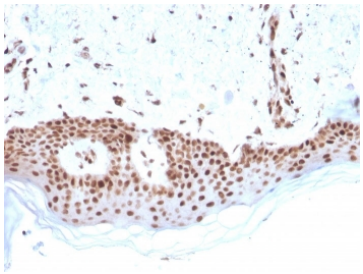
Catalog No.	Formulation	Size
V7964-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7964-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7964SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

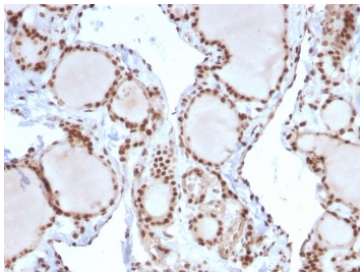
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	MSH2/2622
Purity	Protein G affinity chromatography
UniProt	P43246
Localization	Nuclear
Applications	Flow cytometry: 1-2ug/million cells in 0.1ml Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Immunofluorescence: 1-2ug/ml
Limitations	This MSH2 antibody is available for research use only.



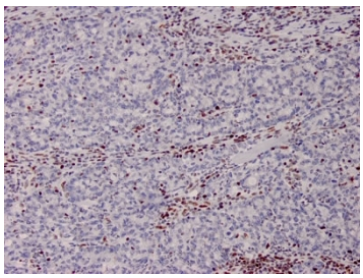
MSH2 Antibody (clone MSH2/2622). Immunohistochemistry analysis of FFPE human colon carcinoma using MSH2 antibody (clone MSH2/2622). Strong nuclear brown chromogenic staining identifies MutS homolog 2 / MSH2-positive tumor epithelial cells within the carcinoma, consistent with nuclear localization of this DNA mismatch repair protein. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to staining.



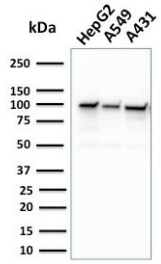
MSH2 Antibody (clone MSH2/2622). Immunohistochemistry analysis of FFPE human basal cell carcinoma using MSH2 antibody (clone MSH2/2622). Strong nuclear brown chromogenic staining identifies MutS homolog 2 / MSH2-positive tumor cells, consistent with nuclear localization of this DNA mismatch repair protein. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to staining.



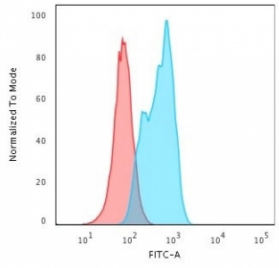
MSH2 Antibody (clone MSH2/2622). Immunohistochemistry analysis of FFPE human thyroid carcinoma using MSH2 antibody. Strong nuclear brown chromogenic staining identifies MutS homolog 2 / MSH2-positive tumor epithelial cells, consistent with the expected nuclear localization of this DNA mismatch repair protein. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to staining.



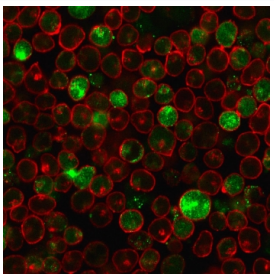
MSH2 Antibody (clone MSH2/2622). Immunohistochemistry analysis of FFPE human colon tissue from a Lynch syndrome patient using MSH2 antibody (clone MSH2/2622). Tumor cells show loss of nuclear MSH2 staining, while surrounding non-neoplastic stromal and inflammatory cells retain nuclear brown chromogenic signal and serve as internal positive controls. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to staining.



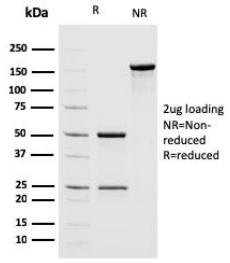
Western blot testing of human cell lysates with MSH2 antibody. Expected molecular weight: ~105 kDa.



Flow cytometry testing of permeabilized human A549 cells with MSH2 antibody; Red=isotype control, Blue= MSH2 antibody.



MSH2 Antibody for Immunofluorescence / MSH2 IF Antibody (clone MSH2/2622). Immunofluorescence analysis of permeabilized human MOLT-4 cells stained with MSH2 Antibody for Immunofluorescence (clone MSH2/2622). MutS homolog 2 / MSH2 is visualized as bright nuclear fluorescence (green) with punctate nuclear staining consistent with localization of the DNA mismatch repair protein within the nucleus. Phalloidin staining (red) highlights the actin cytoskeleton and cell boundaries, providing structural context for the nuclear MSH2 signal.



SDS-PAGE analysis of purified, BSA-free MSH2 antibody as confirmation of integrity and purity.

Description

MutS homolog 2 (MSH2) is a nuclear DNA mismatch repair protein encoded by the MSH2 gene and is a key component of the cellular machinery responsible for maintaining genomic integrity. MSH2 Antibody for Immunofluorescence enables visualization of MutS homolog 2 / MSH2 using fluorescence microscopy, allowing researchers to examine the nuclear localization and spatial organization of this essential DNA repair protein. MSH2 functions by forming heterodimeric complexes with MSH6 or MSH3 to recognize base mismatches and insertion-deletion loops that arise during DNA replication. Because these repair mechanisms are essential for preventing mutation accumulation, MSH2 expression and localization are widely studied in investigations of genomic stability, tumor biology, and DNA repair pathways.

MSH2 antibody, also referred to as MutS homolog 2 antibody or hMSH2 antibody in the literature, detects a nuclear protein that participates directly in DNA mismatch repair complexes. In immunofluorescence experiments, MSH2 Antibody for Immunofluorescence typically produces strong nuclear fluorescence corresponding to sites of DNA repair activity within the nucleus. This nuclear staining pattern allows researchers to clearly distinguish MSH2 from cytoplasmic proteins and makes immunofluorescence a valuable technique for confirming the subcellular localization of mismatch repair proteins in cultured cells and tissue-derived samples.

Immunofluorescence analysis using MSH2 Antibody for Immunofluorescence enables high-resolution imaging of MSH2 distribution across individual cells. Fluorescence microscopy allows researchers to observe nuclear enrichment of MSH2, evaluate variability in expression across cell populations, and examine the organization of DNA repair proteins within chromatin-associated structures. Because fluorescence-based imaging provides spatial information at the single-cell level, immunofluorescence detection of MSH2 is frequently used in studies examining DNA damage responses, replication-associated repair events, and mechanisms that maintain genome stability.

MSH2 Antibody for Immunofluorescence (clone MSH2/2622) is a mouse monoclonal antibody that supports multicolor fluorescence microscopy experiments where MSH2 localization can be evaluated alongside nuclear markers or additional DNA repair proteins. In multiplex immunofluorescence studies, MSH2 staining can be combined with fluorescent markers for chromatin, DNA damage indicators, or mismatch repair partners to analyze co-localization and nuclear repair complexes. These imaging approaches provide valuable insight into the organization of DNA repair pathways and the cellular mechanisms that safeguard genomic stability.

Application Notes

Optimal dilution of the MSH2 Antibody for Immunofluorescence should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 327-427) was used as the immunogen for this MSH2 antibody.

Storage

Store the MSH2 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

H1 MSH2 Antibody for Immunofluorescence / MSH2 IF Antibody (clone MSH2/2622) Alt Name

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