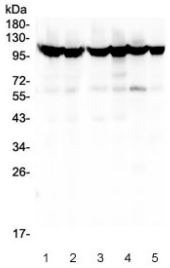
MSH2 Antibody for WB / MSH2 Western Blot Antibody (R31697)

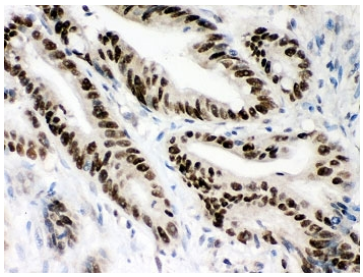
Catalog No.	Formulation	Size
R31697	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

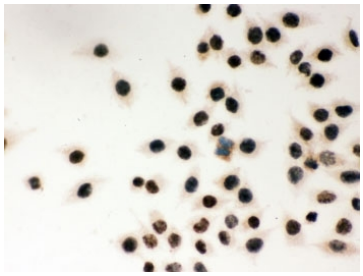
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
Gene ID	4436
Localization	Nuclear
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml Immunocytochemistry: 0.5-1ug/ml Immunofluorescence: 2-4ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This MSH2 antibody is available for research use only.



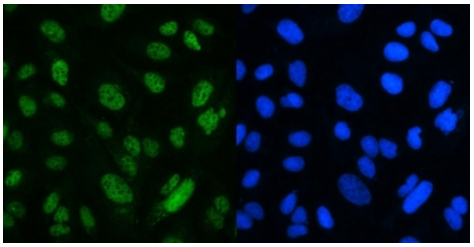
MSH2 Antibody for WB / MSH2 Western Blot Antibody. Western blot analysis of human cell lysates using MSH2 Antibody for WB. Lane 1: HEK293, Lane 2: HEK293 (different lot), Lane 3: HeLa, Lane 4: COLO-320, Lane 5: T-47D, Lane 6: A549. A band is detected at approximately 105 kDa, consistent with the predicted molecular weight of MutS homolog 2 / MSH2.



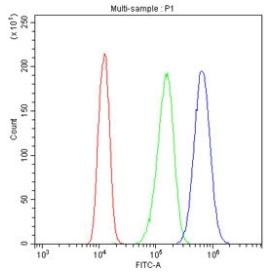
IHC-P: MSH2 antibody testing of human intestine cancer tissue. HIER: steamed with pH6 citrate buffer.



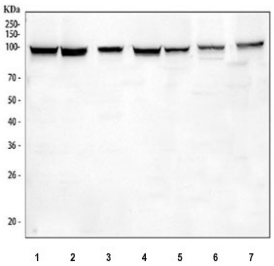
ICC testing of MSH2 antibody and SMMC-7721 cells



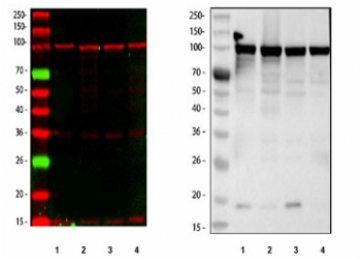
Immunofluorescent staining of FFPE human U-2 OS cells with MSH2 antibody (green) and DAPI nuclear stain (blue). HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



Flow cytometry testing of human A431 cells with MSH2 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= MSH2 antibody.



MSH2 Antibody for WB / MSH2 Western Blot Antibody. Western blot analysis of cell lysates using MSH2 Antibody for WB. Lane 1: human K562, Lane 2: human SH-SY5Y, Lane 3: human HEL, Lane 4: human 293T, Lane 5: human A549, Lane 6: rat PC-12, Lane 7: mouse Neuro-2a. A band is detected at approximately 105 kDa, consistent with the predicted molecular weight of MutS homolog 2 / MSH2.



MSH2 Antibody for WB / MSH2 Western Blot Antibody. Western blot analysis of human cell lysates using MSH2 Antibody for WB. Lane 1: K562, Lane 2: SH-SY5Y, Lane 3: 293T, Lane 4: A549. The left panel shows fluorescence detection using a DyLight 647 secondary antibody, while the right panel shows chemiluminescent detection using an HRP secondary antibody. A band is detected at approximately 105 kDa, consistent with the predicted molecular weight of MutS homolog 2 / MSH2.

Description

MutS homolog 2 (MSH2) is a nuclear DNA mismatch repair protein encoded by the MSH2 gene and is a core component

of the mismatch repair pathway responsible for maintaining genomic stability. MSH2 Antibody for WB enables sensitive detection of MutS homolog 2 / MSH2 by western blot, allowing researchers to analyze expression of this critical DNA repair protein in cell lysates and tissue samples. MSH2 functions by forming heterodimeric complexes with other mismatch repair proteins, including MSH6 and MSH3, to recognize and initiate repair of base mismatches and insertion-deletion loops generated during DNA replication.

MSH2 antibody, also referred to as MutS homolog 2 antibody or hMSH2 antibody in the literature, detects a nuclear protein with a predicted molecular weight of approximately 100 kDa. Western blot analysis using an MSH2 Antibody for WB typically reveals a band near this molecular weight corresponding to the full-length mismatch repair protein. Detection of this band allows researchers to confirm protein expression, evaluate relative abundance between samples, and monitor changes in mismatch repair protein levels under different biological conditions.

Western blot analysis of MSH2 is widely used in studies investigating DNA repair pathways, genomic stability, and cancer biology. Loss or reduction of MSH2 expression is strongly associated with mismatch repair deficiency and microsatellite instability, molecular features commonly observed in several human cancers. By using MSH2 Antibody for WB, researchers can compare MSH2 protein levels between normal and tumor samples, evaluate mismatch repair pathway integrity, and investigate mechanisms leading to genomic instability.

MSH2 Antibody for WB is particularly valuable for experiments examining protein expression changes following genetic manipulation, DNA damage, or drug treatment. Western blot analysis provides a reliable method to evaluate the presence and relative abundance of MSH2 while allowing normalization against loading controls or additional mismatch repair proteins. As a result, MSH2 western blot detection is frequently used to confirm alterations in mismatch repair pathways and to support mechanistic studies of DNA repair and tumor biology.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the MSH2 Antibody for WB may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 337-583) was used as the immunogen for this MSH2 antibody.

Storage

After reconstitution, the MSH2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

MutS homolog 2 antibody, DNA mismatch repair protein MSH2 antibody, hMSH2 antibody, MSH2 mismatch repair antibody

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