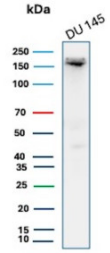
GTBP Antibody / G/T mismatch-binding protein / MSH6 [clone MSH6/13194R] (V5723)

Catalog No.	Formulation	Size
V5723-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5723-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5723SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

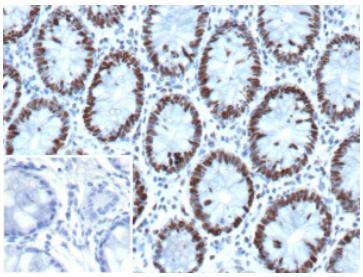
Recombinant RABBIT MONOCLONAL

Bulk quote request

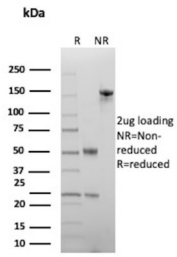
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSH6/13194R
Purity	Protein A affinity
UniProt	P52701
Localization	Nucleus
Applications	Immunohistochemistry (FFPE): 1-2ug/ml Western blot: 2-4ug/ml
Limitations	This GTBP antibody is available for research use only.



GTBP Antibody MSH6/13194R in Human DU145 Prostate Cancer Cells WB. Western blot testing of GTBP Antibody / G/T mismatch-binding protein / MSH6, clone MSH6/13194R, in human DU145 prostate cancer cell lysate. A prominent band is detected at approximately 160 kDa, consistent with the predicted molecular weight of MSH6. This Recombinant GTBP Antibody demonstrates detection of G/T mismatch-binding protein in human prostate cancer cells.



GTBP Antibody MSH6/13194R in Human Colon IHC. Immunohistochemistry testing of GTBP Antibody / G/T mismatch-binding protein / MSH6, clone MSH6/13194R, in FFPE human colon tissue. Strong nuclear staining is observed in colonic epithelial cells, consistent with the nuclear localization of GTBP/MSH6. The inset shows a secondary-only negative control in which PBS was substituted for the primary antibody, demonstrating minimal background staining under the tested conditions.



GTBP Antibody MSH6/13194R Purity Analysis by SDS-PAGE. Electrophoretic analysis of purified GTBP Antibody / G/T mismatch-binding protein / MSH6, clone MSH6/13194R, under reducing (R) and non-reducing (NR) conditions with 2 ug of antibody loaded per lane. The reduced sample shows bands at approximately 50 and 25 kDa, corresponding to the antibody heavy and light chains, while the non-reduced sample shows intact antibody at approximately 150 kDa. This analysis confirms the purity and integrity of the antibody preparation.

Description

MutS homolog 6 (MSH6), encoded by the MSH6 gene, is a nuclear DNA mismatch repair protein that plays an essential role in maintaining genomic stability. Recombinant GTBP Antibody / G/T mismatch-binding protein (clone MSH6/13194R) recognizes this DNA repair factor, which is widely referred to in the literature as MutS homolog 6, GTBP, or G/T mismatch-binding protein. MSH6 forms a heterodimer with MutS homolog 2 (MSH2) to create the MutSalpha complex, a key component of the DNA mismatch repair pathway responsible for detecting single base mismatches and small insertion-deletion loops that arise during DNA replication. By recognizing these replication errors, the MutSalpha complex initiates a repair cascade that preserves genome integrity in proliferating cells.

In tissue-based studies, immunohistochemistry is commonly used to evaluate nuclear expression of MSH6 within formalin-fixed, paraffin-embedded tissue sections. Recombinant GTBP Antibody / G/T mismatch-binding protein is particularly useful for visualizing nuclear localization of the MSH6 protein in epithelial and lymphoid cell populations that undergo active DNA replication. Because MSH6 functions within the nucleus as part of the DNA mismatch recognition machinery, immunohistochemical staining typically appears as distinct nuclear labeling rather than cytoplasmic or membranous signal. In normal tissues, nuclear staining is commonly observed in proliferating epithelial cells and germinal center lymphocytes where DNA replication activity is high.

The MSH6 gene is located on chromosome 2p16 and encodes a member of the MutS family of mismatch repair proteins. Within the MutSalpha complex, MSH6 is responsible for recognizing mismatched base pairs, while MSH2 stabilizes the complex and helps recruit downstream repair factors such as MLH1 and PMS2. These proteins coordinate excision of the incorrect DNA strand and synthesis of the corrected sequence. Defects in this mismatch repair pathway lead to accumulation of replication errors and increased genomic instability.

Loss of MSH6 expression has been associated with mismatch repair deficiency and microsatellite instability in several tumor types. For this reason, MSH6 protein expression is frequently examined in cancer research using immunohistochemistry to evaluate nuclear staining patterns within tumor tissues. Tumors with intact mismatch repair typically show preserved nuclear MSH6 staining, whereas tumors with MSH6 gene alterations may demonstrate reduced or absent nuclear expression. These staining patterns help researchers investigate DNA repair mechanisms and genomic instability in colorectal carcinoma, endometrial carcinoma, and other malignancies linked to mismatch repair defects.

MSH6 is also known by several established synonyms including MutS homolog 6, GTBP, and G/T mismatch-binding protein. These names reflect the protein's function in recognizing G/T mismatched base pairs during DNA replication. A recombinant rabbit monoclonal antibody such as clone MSH6/13194R enables clear detection of nuclear MSH6 expression in tissue sections and is suitable for research applications investigating DNA mismatch repair biology and

genomic stability.

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 GTBP antibody should be determined by the researcher.

Immunogen

A portion of amino acids 1-200 from human G/T mismatch-binding protein was used as the immunogen for the recombinant GTBP antibody.

Storage

Aliquot the GTBP antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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