

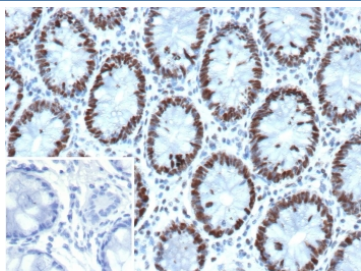
Recombinant GTBP Antibody / G/T mismatch-binding protein / MSH6 [clone MSH6/13194R] (V5723)

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
Limitations	This recombinant GTBP antibody is available for research use only.



IHC staining of FFPE human colon tissue with recombinant GTBP antibody (clone MSH6/13194R). Inset: PBS used in place of primary Ab (secondary Ab negative control).
 HIERS: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.

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.

Application Notes

Optimal dilution of the recombinant 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 recombinant GTBP antibody and store frozen at -20°C or colder. Avoid repeated freeze-thaw cycles.

