Technical Data Sheet

Purified Mouse Anti-MSH6

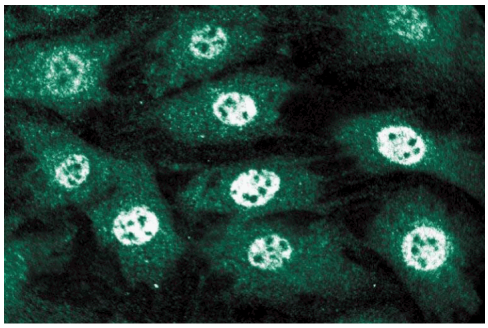
Product Information

Material Number:	**610918**
Alternate Name:	GTBP
Size:	50 µg
Concentration:	250 µg/ml
Clone:	44/MSH6
Immunogen:	Human MSH6 aa. 225-333
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Dog, Mouse, Rat
Target MW:	160 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

DNA mismatch repair in bacteria is carried out by the MutL, MutH, and MutS proteins. Initial binding of MutS to the mismatched DNA is followed by binding of the MutH endonuclease and MutL. Together these proteins form a complex that mediates excision repair. Mutations or deficiencies of any of these bacterial proteins results in a mutator phenotype that is characterized by genetic instability. MSH2, MSH3, and MSH6 are human homologs of MutS, while MLH1, PMS1, and PMS2 are homologs of MutL. As a heterodimer with MSH2, MSH6 binds to DNA containing G/T mismatches. The MSH2-MSH6 complex recognizes single-base mispairs and insertion/deletion loops. Binding of this complex induces conformational changes in the DNA that lead to the binding of an MLH-PMS1 complex and excision repair. Mutations in the human genes are associated with hereditary nonpolyposis colon cancer (HNPCC), a common hereditary disease in humans. HNPCC is characterized by frequent microsatellite mutations that arise from somatic mutation due to a replication error (RER+) phenotype. This phenotype is analogous to the bacterial system and is directly linked to DNA mismatch repair deficiencies.

Western blot analysis of MSH6/GTBP on A431 lysate.
Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of anti-MSH6/GTBP.



Immunofluorescent staining of C3H10T1/2 cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

BD Biosciences

www.bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit **www.bdbiosciences.com/how_to_order/**

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
611447	A431 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Christmann M, Kaina B. Nuclear translocation of mismatch repair proteins MSH2 and MSH6 as a response of cells to alkylating agents. *J Biol Chem.* 2000; 275(46):36256-36262.(Clone-specific: Immunofluorescence, Immunoprecipitation, Western blot)

Humbert O, Hermine T, Hernandez H, et al. Implication of protein kinase C in the regulation of DNA mismatch repair protein expression and function. *J Biol Chem.* 2002; 277(20):18061-18068.(Clone-specific: Gel shift, Western blot)

Kariola R, Otway R, Lonnqvist KE, et al. Two mismatch repair gene mutations found in a colon cancer patient--which one is pathogenic. *Hum Genet.* 2003; 112(2):105-109.(Clone-specific: Immunohistochemistry, Immunoprecipitation, Western blot)

Palombo F, Gallinari P, Iaccarino I, et al. GTBP, a 160-kilodalton protein essential for mismatch-binding activity in human cells. *Science.* 1995; 268(5219):1912-1914.(Biology)

Saitoh H, Pizzi MD, Wang J. Perturbation of SUMOlation enzyme Ubc9 by distinct domain within nucleoporin RanBP2/Nup358. *J Biol Chem.* 2002; 277(7):4755-4763.(Clone-specific: Immunofluorescence)