

MSH6 Monoclonal Antibody (SP93)

Catalog NumberMA5-16380

Product data sheet

Details		Species Reactivity	
Size	500 µL	Species reactivity	Human
Host/Isotope	Rabbit / IgG	<div><div>Tested Applications</div><div>Dilution *</div></div> <div><div>Flow Cytometry (Flow)</div><div>Immunohistochemistry (Paraffin) (IHC (P))</div><div>Western Blot (WB)</div><div>Immunocytochemistry (ICC/IF)</div></div> <div><div>1:20</div><div>1:100</div><div>1:100-1:1,000</div><div>1:250</div></div> <div><div>* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.</div></div>	
Class	Monoclonal		
Type	Antibody		
Clone	SP93		
Immunogen	Synthetic peptide corresponding to internal region of human MSH6 protein.		
Conjugate	Unconjugated		
Form	Liquid		
Purification	Protein A/G		
Storage buffer	PBS, pH 7.6, with 1% BSA		
Contains	0.1% sodium azide		
Storage Conditions	4° C		

Product specific information

Heat-mediated antigen retrieval is recommended prior to staining, using a 1mM EDTA buffer, pH 8.0, for 10 minutes followed by cooling at room temperature for 20 min. Following antigen retrieval, incubate samples with primary antibody for 30 min at room temperature. A suggested positive control is rectal carcinoma.

Background/Target Information

The DNA mismatch repair MSH2/MSH6 heterodimer is responsible for the detection of DNA damage, and may promote apoptosis in normal cells, thus protecting mammals from ultraviolet-induced malignant transformation and hence the prevention of skin cancer.

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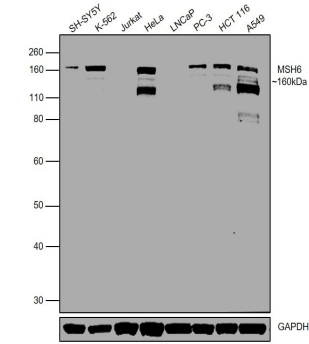
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Product Images For MSH6 Monoclonal Antibody (SP93)

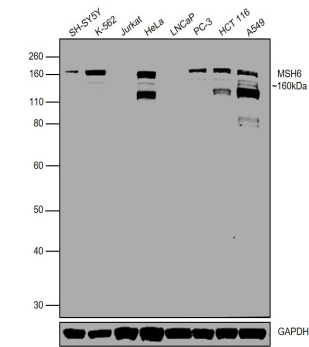
MSH6 Antibody (MA5-16380)

Antibody specificity was demonstrated by detection of differential basal expression of the target across cell lines owing to their inherent genetic constitution. Relative expression of MSH6 was observed in all cell lines and tissue lysates in comparison to Jurkat and LNCaP using MSH6 Monoclonal Antibody (SP93) (Product # MA5-16380) in western blot. {RE}



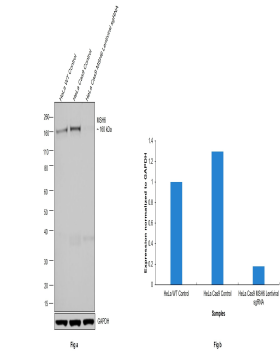
MSH6 Antibody (MA5-16380) in WB

Western blot was performed using Anti-MSH6 Monoclonal Antibody (SP93) (Product # MA5-16380) and a 160 kDa band corresponding to MSH6 was observed in all the tested cell models, except Jurkat and LNCaP which are reported to be negative. This target undergoes heavy phosphorylation and multiple bands between 120-160 kDa can be expected. Modified whole cell lysate (1% SDS) (30 µg lysate) of SH-SY5Y (Lane 1), K-562 (Lane 2), Jurkat (Lane 3), HeLa (Lane 4), LNCaP (Lane 5), PC-3 (Lane 6), HCT 116 (Lane 7) and A549 (Lane 8) were electrophoresed using NuPAGE® 10 % Bis-Tris gel (Product # NP0302BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:1,000 dilution) and detected by chemiluminescence with Goat anti-Rabbit IgG (Heavy Chain), Superclonal™ Recombinant Secondary Antibody, HRP (Product # A27036, 1:4,000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).



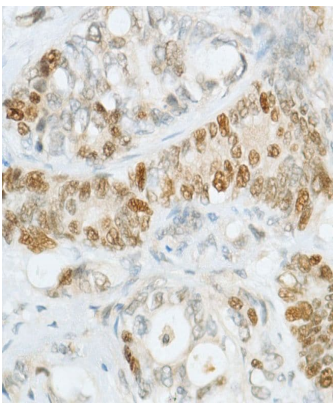
MSH6 Antibody (MA5-16380)

Antibody specificity was demonstrated by CRISPR-Cas9 mediated knockout of target protein. A reduced signal was observed for target protein in HeLa Cas9 cell line transduced with MSH6 Lentiviral sgRNA compared to control cell line using Anti-MSH6 Monoclonal Antibody (SP93) (Product # MA5-16380). {KO}



MSH6 Antibody (MA5-16380) in IHC (P)

Immunohistochemical (paraffin) analysis of MSH6 using anti-MSH6 Monoclonal Antibody (Product # MA5-16380) in Rectal Cancer Tissue. The recommended dilution for this antibody in immunohistochemistry applications is 1:100.



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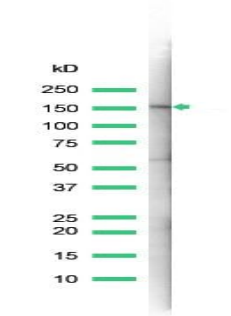
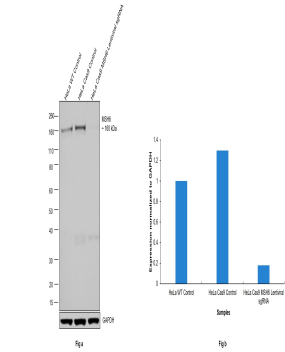
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MSH6 Antibody (MA5-16380) in WB

CRISPR-Cas9 mediated genome editing ofMSH6 (as confirmed by next generation sequencing) was achieved by using LentiArray™ Lentiviral sgRNA (Product # A32042, Assay ID CRISPR1065222_LV) and LentiArray Cas9 Lentivirus (Product # A32064). Fig (a) Western blot analysis of MSH6 was performed by loading 30 µg of HeLa wild type (Lane 1), HeLa Cas9 (Lane 2) and HeLa Cas9 cells transduced with MSH6 Lentiviral sgRNA (Lane 3) modified whole cell extracts. The samples were electrophoresed using NuPAGE™ 3-8% Tris-Acetate Protein Gel (Product # EA0378BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with Anti-MSH6 Monoclonal Antibody (SP93) (Product # MA5-16380) using 1:1000 dilution and Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A27036 1:5000 dilution).Chemiluminescent detection was performed using SuperSignal™ West Dura Extended Duration Substrate (Product # 34076). A reduced signal in sgRNA transduced cells using the LentiArray™ CRISPR product line confirms that antibody is specific toMSH6 (Fig (b)). Uncharacterized band was observed in all the samples at ~40 kDa.

MSH6 Antibody (MA5-16380) in WB

Western blot analysis of A431 Cells using anti-MSH6 Monoclonal Antibody (Product # MA5-16380). The recommended dilution for this antibody in western blot applications is 1:100.



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