

DESCRIPTION

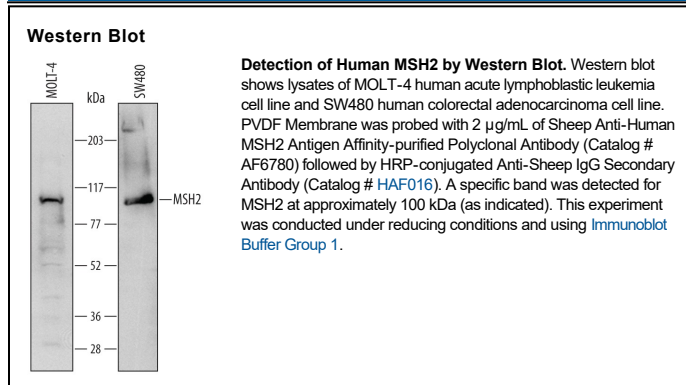
Species Reactivity	Human
Specificity	Detects human MSH2 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human MSH2 Ala2-Asp140 Accession # P43246
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

MSH2 (MutS Homolog 2) is a 100-106 kDa member of the mutS family of DNA mismatch repair molecules. It is a DNA binding protein that is expressed in rapidly proliferating cells, and acts in concert with multiple subunits. MSH2 forms a heterodimer with MSH6, forming MutS α . This dimer recognizes and repairs both nucleotide misparings and one or two aberrant nucleotide insertions/deletions. MSH2 also heterodimerizes with MSH3, forming MutS β . This complex acts on DNA double-stranded breaks, and repairs large nucleotide insertions/deletions (<15 bases). MutS α is associated with BLM:p53:RAD51 complexes, while MSH2 β is associated with SLX4/BTBD12 complexes. Human MSH2 is 934 amino acids (aa) in length. It contains three MutS domains (aa 18-132; 158-284; 297-612) plus an ABC transporter signature motif that may hydrolyze ATP (aa 633-852). There are multiple splice variants. One shows a premature truncation after His429, while others contain a 46 aa substitution for aa 879-934, a 29 aa substitution for aa 462-934, a 28 aa substitution for aa 783-934, a 3 aa substitution for aa 532-934, a 5 aa substitution for aa 482-934 and a 31 aa substitution for aa 379-934. Over aa 1-140, human MSH2 shares 94% aa identity with mouse MSH2.