

Product datasheet for **KN310424BN**

Msh6 Mouse Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 mBFP-Neo donor, 1 scramble control
Donor DNA:	mBFP-Neo
Symbol:	Msh6
Locus ID:	17688
Components:	<p>KN310424G1, Msh6 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)</p> <p>KN310424G2, Msh6 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)</p> <p>KN310424BND, donor DNA containing left and right homologous arms and mBFP-Neo functional cassette.</p> <p>GE100003, scramble sequence in pCas-Guide vector</p>
RefSeq:	NM_010830
UniProt ID:	P54276
Synonyms:	AU044881; AW550279; GTBP; Gtmbp
Summary:	<p>Component of the post-replicative DNA mismatch repair system (MMR). Heterodimerizes with MSH2 to form MutS alpha, which binds to DNA mismatches thereby initiating DNA repair. When bound, MutS alpha bends the DNA helix and shields approximately 20 base pairs, and recognizes single base mismatches and dinucleotide insertion-deletion loops (IDL) in the DNA. After mismatch binding, forms a ternary complex with the MutL alpha heterodimer, which is thought to be responsible for directing the downstream MMR events, including strand discrimination, excision, and resynthesis. ATP binding and hydrolysis play a pivotal role in mismatch repair functions. The ATPase activity associated with MutS alpha regulates binding similar to a molecular switch: mismatched DNA provokes ADP-->ATP exchange, resulting in a discernible conformational transition that converts MutS alpha into a sliding clamp capable of hydrolysis-independent diffusion along the DNA backbone. This transition is crucial for mismatch repair. MutS alpha may also play a role in DNA homologous recombination repair. Recruited on chromatin in G1 and early S phase via its PWWP domain that specifically binds trimethylated 'Lys-36' of histone H3 (H3K36me3): early recruitment to chromatin to be replicated allowing a quick identification of mismatch repair to initiate the DNA mismatch repair reaction (By similarity).[UniProtKB/Swiss-Prot Function]</p>



[View online »](#)

Product images:

