PMS2 recombinant protein

CatalogNo: YD3031

Key Features

Reactivity
- Human,

Recommended Dilution Ratios

Storage

Storage*	-15°C to -25°C/1 year(Avoid freeze / thaw cycles)
Formulation	Phosphate-buffered solution

Basic Information

Source	Mammalian cells
Purification	Mammalian cells
Purity	>90% as determined by SDS-PAGE

Immunogen Information

Squence	Amino acid:391-440,with human FC tag.

Target Information

Gene name	PMS2 PMSL2

Protein Name	Mismatch repair endonuclease PMS2 (DNA mismatch repair protein PMS2) (PMS1 protein homolog 2)

Organism	Gene ID	UniProt ID
Human	5395;	P54278;

Cellular Localization	Nucleus .
Function	Component of the post-replicative DNA mismatch repair system (MMR) (PubMed:30653781, PubMed:35189042). Heterodimerizes with MLH1 to form MutL alpha. DNA repair is initiated by MutS alpha (MSH2-MSH6) or MutS beta (MSH2-MSH3) binding to a dsDNA mismatch, then MutL alpha is recruited to the heteroduplex. Assembly of the MutL-MutS-heteroduplex ternary complex in presence of RFC and PCNA is sufficient to activate endonuclease activity of PMS2. It introduces single-strand breaks near the mismatch and thus generates new entry points for the exonuclease EXO1 to degrade the strand containing the mismatch. DNA methylation would prevent cleavage and therefore assure that only the newly mutated DNA strand is going to be corrected. MutL alpha (MLH1-PMS2) interacts physically with the clamp loader subunits of DNA polymerase III, suggesting that it may play a role to recruit the DNA polymerase III to the site of the MMR. Also implicated in DNA damage signaling, a process which induces cell cycle arrest and can lead to apoptosis in case of major DNA damages. Possesses an ATPase activity, but in the absence of gross structural changes, ATP hydrolysis may not be necessary for proficient mismatch repair (PubMed:35189042).

Validation Data

Contact information

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Please scan the QR code to access additional product information:
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