

## PMS2 recombinant protein

CatalogNo: YD3031

### | Key Features

#### Reactivity

- Human

### | Storage

**Storage\*** -15°C to -25°C/1 year(Avoid freeze / thaw cycles)

**Formulation** Phosphate-buffered solution

### | Recommended Dilution Ratios

### | Basic Information

**Source** Mammalian cells

**Purification** Mammalian cells

**Purity** >90% as determined by SDS-PAGE

### | Immunogen Information

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

### | Target Information

**Gene name** PMS2 PMSL2

<b>Protein Name</b>	Mismatch repair endonuclease PMS2 (DNA mismatch repair protein PMS2) (PMS1 protein homolog 2)		
	<b>Organism</b>	<b>Gene ID</b>	<b>UniProt ID</b>
	Human	<a href="#">5395</a> ;	<a href="#">P54278</a> ;
<b>Cellular Localization</b>	Nucleus .		
<b>Function</b>	<p>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).</p>		

| Validation Data

| Contact information

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