

## Product datasheet for **TR320419**

### MLH1 Human shRNA Plasmid Kit (Locus ID 4292)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	MLH1 Human shRNA Plasmid Kit (Locus ID 4292)
Locus ID:	4292
Synonyms:	COCA2; FCC2; hMLH1; HNPCC; HNPCC2; MMRCS1
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	MLH1 - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 4292). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">NM_000249</a> , <a href="#">NM_001167617</a> , <a href="#">NM_001167618</a> , <a href="#">NM_001167619</a> , <a href="#">NM_001258271</a> , <a href="#">NM_001258273</a> , <a href="#">NM_001258274</a> , <a href="#">NM_001354615</a> , <a href="#">NM_001354616</a> , <a href="#">NM_001354617</a> , <a href="#">NM_001354618</a> , <a href="#">NM_001354619</a> , <a href="#">NM_001354620</a> , <a href="#">NM_001354621</a> , <a href="#">NM_001354622</a> , <a href="#">NM_001354623</a> , <a href="#">NM_001354624</a> , <a href="#">NM_001354625</a> , <a href="#">NM_001354626</a> , <a href="#">NM_001354627</a> , <a href="#">NM_001354628</a> , <a href="#">NM_001354629</a> , <a href="#">NM_001354630</a> , <a href="#">NM_000249.1</a> , <a href="#">NM_000249.2</a> , <a href="#">NM_000249.3</a> , <a href="#">NM_001167618.1</a> , <a href="#">NM_001167619.1</a> , <a href="#">NM_001167617.1</a> , <a href="#">NM_001258273.1</a> , <a href="#">NM_001258274.1</a> , <a href="#">NM_001258271.1</a> , <a href="#">BC006850</a> , <a href="#">BC006850.1</a> , <a href="#">NM_000249.4</a> , <a href="#">NM_001258274.2</a> , <a href="#">NM_001167617.2</a>
UniProt ID:	<a href="#">P40692</a>
Summary:	The protein encoded by this gene can heterodimerize with mismatch repair endonuclease PMS2 to form MutL alpha, part of the DNA mismatch repair system. When MutL alpha is bound by MutS beta and some accessory proteins, the PMS2 subunit of MutL alpha introduces a single-strand break near DNA mismatches, providing an entry point for exonuclease degradation. The encoded protein is also involved in DNA damage signaling and can heterodimerize with DNA mismatch repair protein MLH3 to form MutL gamma, which is involved in meiosis. This gene was identified as a locus frequently mutated in hereditary nonpolyposis colon cancer (HNPCC). [provided by RefSeq, Aug 2017]



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- shRNA Design:** These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact [techsupport@origene.com](mailto:techsupport@origene.com). If you need a special design or shRNA sequence, please utilize our [custom shRNA service](#).
- Performance Guaranteed:** OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.
- For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at [techsupport@origene.com](mailto:techsupport@origene.com). Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).