

## Product datasheet for **MR210511L3V**

### **MIh1 (NM\_026810) Mouse Tagged ORF Clone Lentiviral Particle**

#### **Product data:**

|                           |  |
|---------------------------|--|
| Product Type:             | Lentiviral Particles   |
| Product Name:             | MIh1 (NM_026810) Mouse Tagged ORF Clone Lentiviral Particle  |
| Symbol:                   | MIh1   |
| Synonyms:                 | 1110035C23Rik; AI317206; AI325952; AI561766  |
| Mammalian Cell Selection: | Puromycin  |
| Vector:                   | pLenti-C-Myc-DDK-P2A-Puro (PS100092)   |
| Tag:                      | Myc-DDK  |
| ACCN:                     | NM_026810  |
| ORF Size:                 | 2283 bp  |
| ORF Nucleotide Sequence:  | The ORF insert of this clone is exactly the same as(MR210511).   |
| OTI Disclaimer:           | The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <a href="#">More info</a> |
| OTI Annotation:           | This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.   |
| RefSeq:                   | <a href="#">NM_026810.1</a> , <a href="#">NP_081086.1</a>  |
| RefSeq Size:              | 2598 bp  |
| RefSeq ORF:               | 2283 bp  |
| Locus ID:                 | 17350  |
| UniProt ID:               | <a href="#">Q9JK91</a>   |
| Cytogenetics:             | 9 60.92 cM   |



[View online »](#)

**Gene Summary:**

Heterodimerizes with Pms2 to form MutL alpha, a component of the post-replicative DNA mismatch repair system (MMR). 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. Heterodimerizes with Mlh3 to form MutL gamma which plays a role in meiosis (By similarity).[UniProtKB/Swiss-Prot Function]