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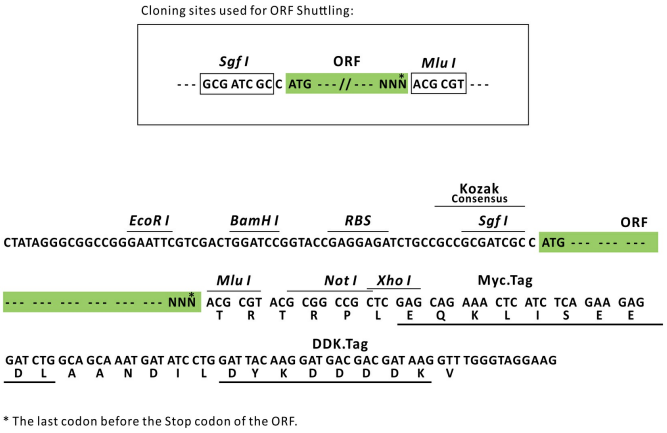
# Product datasheet for MR218369L3

## Samhd1 (NM_018851) Mouse Tagged Lenti ORF Clone

## Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Samhd1 (NM_018851) Mouse Tagged Lenti ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | Samhd1 |
| **Synonyms:** | E330031J07Rik; Mg11 |
| **Mammalian Cell Selection:** | Puromycin |
| **Vector:** | pLenti-C-Myc-DDK-P2A-Puro (PS100092) |
| **E. coli Selection:** | Chloramphenicol (34 ug/mL) |
| **ORF Nucleotide Sequence:** | The ORF insert of this clone is exactly the same as(MR218369). |
| **Restriction Sites:** | SgfI-MluI |
| **Cloning Scheme:** | |




| | |
|---|---|
| **ACCN:** | NM_018851 |
| **ORF Size:** | 1974 bp |

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| | |
|---|---|
| **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. More info |
| **OTI Annotation:** | This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene. |
| **Components:** | The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water). |
| **Reconstitution Method:** | 1. Centrifuge at 5,000xg for 5min.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C. |
| **RefSeq:** | NM_018851.3, NP_061339.3 |
| **RefSeq Size:** | 3887 bp |
| **RefSeq ORF:** | 1977 bp |
| **Locus ID:** | 56045 |
| **UniProt ID:** | Q60710 |
| **Cytogenetics:** | 2 H1 |

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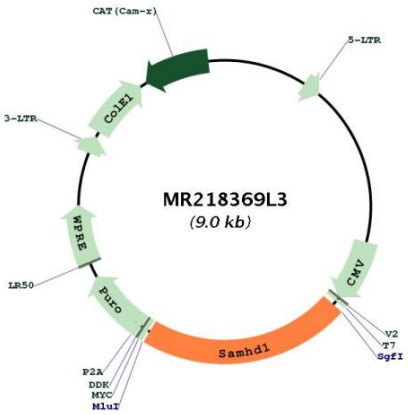
**Gene Summary:** Isoform 1: Protein that acts both as a host restriction factor involved in defense response to virus and as a regulator of DNA end resection at stalled replication forks (By similarity). Has deoxynucleoside triphosphate (dNTPase) activity, which is required to restrict infection by viruses: dNTPase activity reduces cellular dNTP levels to levels too low for retroviral reverse transcription to occur, blocking early-stage virus replication in dendritic and other myeloid cells (PubMed:23972988, PubMed:23872947, PubMed:26667483, PubMed:29379009). Likewise, suppresses LINE-1 retrotransposon activity (PubMed:26667483). In addition to virus restriction, dNTPase activity acts as a regulator of DNA precursor pools by regulating dNTP pools (By similarity). Phosphorylation at Thr-634 acts as a switch to control dNTPase-dependent and -independent functions: it inhibits dNTPase activity and ability to restrict infection by viruses, while it promotes DNA end resection at stalled replication forks (By similarity). Functions during S phase at stalled DNA replication forks to promote the resection of gapped or reversed forks: acts by stimulating the exonuclease activity of MRE11, activating the ATR-CHK1 pathway and allowing the forks to restart replication (By similarity). Its ability to promote degradation of nascent DNA at stalled replication forks is required to prevent induction of type I interferons, thereby preventing chronic inflammation (By similarity). Ability to promote DNA end resection at stalled replication forks is independent of dNTPase activity (By similarity). Enhances immunoglobulin hypermutation in B-lymphocytes by promoting transversion mutation (PubMed:29669924).[UniProtKB/Swiss-Prot Function]

## Product images:




Circular map for MR218369L3

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