# Product datasheet for TL512307

## Micu1 Mouse shRNA Plasmid (Locus ID 216001)

## Product data:

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| **Product Type:** | shRNA Plasmids |
| **Product Name:** | Micu1 Mouse shRNA Plasmid (Locus ID 216001) |
| **Locus ID:** | 216001 |
| **Synonyms:** | C730016L05Rik; Calc; Cbara1 |
| **Vector:** | pGFP-C-shLenti (TR30023) |
| **E. coli Selection:** | Chloramphenicol (34 ug/ml) |
| **Mammalian Cell Selection:** | Puromycin |
| **Format:** | Lentiviral plasmids |
| **Components:** | Micu1 - Mouse, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 216001). 5µg purified plasmid DNA per construct<br>29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free. |
| **RefSeq:** | BC018320, BC023022, BC023042, BC026566, NM_001291442, NM_001291443, NM_144822, NM_001359267, NM_144822.1, NM_144822.2, NM_144822.3, NM_001291443.1, NM_001291442.1 |
| **UniProt ID:** | Q8VCX5 |
| **Summary:** | Key regulator of mitochondrial calcium uniporter (MCU) that senses calcium level via its EF-hand domains (PubMed:24560927). MICU1 and MICU2 form a disulfide-linked heterodimer that stimulates and inhibits MCU activity, depending on the concentration of calcium (PubMed:24560927). MICU1 acts both as an activator or inhibitor of mitochondrial calcium uptake (By similarity). Acts as a gatekeeper of MCU at low concentration of calcium, preventing channel opening (By similarity). Enhances MCU opening at high calcium concentration, allowing a rapid response of mitochondria to calcium signals generated in the cytoplasm (PubMed:24560927). Regulates glucose-dependent insulin secretion in pancreatic beta-cells by regulating mitochondrial calcium uptake (By similarity). Induces T-helper 1-mediated autoreactivity, which is accompanied by the release of IFNG (By similarity). [UniProtKB/Swiss-Prot Function] |
| **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. If you need a special design or shRNA sequence, please utilize our custom shRNA service. |

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| **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.<br><br>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. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred). |