

Product datasheet for **RN207839**

Mcts1 (NM_001044237) Rat Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Mcts1 (NM_001044237) Rat Untagged Clone
Tag: Tag Free
Symbol: Mcts1
Synonyms: MGC112904
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Fully Sequenced ORF: >RN207839 representing NM_001044237
Red=Cloning site **Blue**=ORF **Orange**=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGGCAAAGGAAGATTTGATGAAAAAGAAAATGTGTCCAACATGCATCCAGTTGAAAACCTCGTTATTA
AGGGTATTAATAATCAATTGCTAGAGCAATTTCCAGGTATTGAACCATGGCTTAATCAAATCATGCCTAA
GAAAGATCCTGTGAAAATGTCCGATGCCATGAACACATAGAAAATCCTTACAGTAAATGGAGAGTTACTG
TTTTTTAGACAAAGAGAAGGGCCTTTTTATCCAACCTTAAGATTACTTCATAAATATCCTTTTATCTTG
CACATCAGCAGGTTGATAAAGGAGCCATCAAATTTGACTCAGTGGAGCAAATATCATGTGTCCCGGCTT
AACGTCTCCTGGAGCTAAGCTTTATCCTGCTGCAGTAGATACTATTGTTGCAATCATGGCAGAAGGAAAA
CAACATGCTTTATGTGTGGCGTCATGAAGATGTCTGCAGAAGATATTGAGAAAAGTCAACAAAGGAATTG
GCATTGAAAATATCCATTATCTAAATGATGGGCTGTGGCATATGAAGACATATAAA**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001044237
Insert Size: 549 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).



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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:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.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:	<u>NM_001044237.1, NP_001037702.1</u>
RefSeq Size:	1240 bp
RefSeq ORF:	549 bp
Locus ID:	302500
UniProt ID:	<u>Q4G009</u>
Cytogenetics:	Xq35
Gene Summary:	Anti-oncogene that plays a role in cell cycle regulation; decreases cell doubling time and anchorage-dependent growth; shortens the duration of G1 transit time and G1/S transition. When constitutively expressed, increases CDK4 and CDK6 kinases activity and CCND1/cyclin D1 protein level, as well as G1 cyclin/CDK complex formation. Plays a role as translation enhancer; Recruits the density-regulated protein/DENR and binds to the cap complex of the 5'-terminus of mRNAs, subsequently altering the mRNA translation profile; Up-regulates protein levels of BCL2L2, TFDP1, MRE11, CCND1 and E2F1, while mRNA levels remains constant. Hyperactivates DNA damage signaling pathway; increased gamma-irradiation-induced phosphorylation of histone H2AX, and induces damage foci formation. Increases the overall number of chromosomal abnormalities such as larger chromosomes formation and multiples chromosomal fusions when overexpressed in gamma-irradiated cells. May play a role in promoting lymphoid tumor development: lymphoid cell lines overexpressing MCTS1 exhibit increased growth rates and display increased protection against apoptosis. May contribute to the pathogenesis and progression of breast cancer via promotion of angiogenesis through the decline of inhibitory THBS1/thrombospondin-1, and inhibition of apoptosis. Involved in the process of proteasome degradation to down-regulate Tumor suppressor p53/TP53 in breast cancer cell; Positively regulates phosphorylation of MAPK1 and MAPK3 (By similarity).[UniProtKB/Swiss-Prot Function]