

Product datasheet for **SC325571**

Malignant T cell amplified sequence 1 (MCTS1) (NM_001137554) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Malignant T cell amplified sequence 1 (MCTS1) (NM_001137554) Human Untagged Clone
Tag:	Tag Free
Symbol:	MCTS1
Synonyms:	MCT-1; MCT1
Vector:	<u>pCMV6 series</u>
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001137554, the custom clone sequence may differ by one or more nucleotides ATGGGCAAAGGAAGATTTGATGAAAAAGAAAATGTGTCCAACATGCCAGTTGAAAAC TCAGTTATTAAGGGTATTAAGAATCAATTGATAGAGCAATTTCCAGGTATTGAACCATGG CTTAATCAAATCATGCCTAAGAAAGATCCTGTCAAATAGTCCGATGCCATGAACATATA GAAATCCTTACAGTAAATGGAGAATTACTCTTTTTAGACAAAGAGAAGGGCCTTTTTAT CCAACCCTAAGATTACTTCACAAATATCCTTTTATCCTGCCACACCAGCAGGTTGATAAA GGAGCCATCAAATTTGACTCAGTGGAGCAAATATCATGTGTCCAGGCTTAACTTCTCCT GGAGCTAAGCTTTACCCTGCTGCAGTAGATACCATTGTTGCTATCATGGCAGAAGGAAAA CAGCATGCTCTATGTGTTGGAGTCATGAAGATGTCTGCAGAAGACATTGAGAAAAGTCAAC AAAGGAATTGGCATTGAAAATATCCATTATTTAAATGATGGGCTGTGGCATATGAAGACA TATAAA
Restriction Sites:	Please inquire
ACCN:	NM_001137554
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).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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).



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Reconstitution Method:

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: [NM_001137554.1](#), [NP_001131026.1](#)

RefSeq Size: 9617 bp

RefSeq ORF: 549 bp

Locus ID: 28985

UniProt ID: [Q9ULC4](#)

Cytogenetics: Xq24

Protein Families: Druggable Genome

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. Involved in translation initiation; promotes recruitment of aminoacylated initiator tRNA to P site of 40S ribosomes. Can promote release of deacylated tRNA and mRNA from recycled 40S subunits following ABCE1-mediated dissociation of post-termination ribosomal complexes into subunits. 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. Involved in translation initiation; promotes aminoacylated initiator tRNA to P site of 40S ribosomes. Can promote release of deacylated tRNA and mRNA from recycled 40S subunits following ABCE1-mediated dissociation of post-termination ribosomal complexes into subunits.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) differs in the 5' UTR, lacks a portion of the 5' coding region, and initiates translation at an alternate start codon, compared to variant 1. The encoded isoform (2) is longer and has a distinct N-terminus, compared to isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.