OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for SC328373

Thymidine Kinase 2 (TK2) (NM_001172643) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Thymidine Kinase 2 (TK2) (NM_001172643) Human Untagged Clone
Tag:	Tag Free
Symbol:	TK2
Synonyms:	MTDPS2; MTTK; PEOB3; SCA31
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001172643, the custom clone sequence may differ by one or more nucleotides ATGGGTGCGTTCTGCCAGCGTCCTAGCAGTGATAAAGAACAGGAAAAAGAGAAAAAATCA GTGATCTGTGTCGAGGGCAATATTGCAAGTGGGAAGACGACATGCCTGGAATTCTTCTCC AACGCGACAGACGTCGAGGTGTTAACGGAGCCTGTGTCCAAGTGGAGAAATGTCCGTGGC CACAATCCTCTGGGCCTGATGTACCACGATGCCTCTCGCTGGGGTCTTACGCTACAGACT TATGTGCAGCTCACCATGCTGGACAGGCATACTCGTCCTCAGGTGTCATCTGTACGGTTG ATGGAGAGGTCGATTCACAGCGCAAGATACATTTTTGTAGAAAACCTGTATAGAAGTGGG AAGATGCCAGAAGTGGACTATGTAGTTCTGTCGGAATGGTTTGACTGGATCTTGAGGAAC ATGGACGTGTCTGTTGATTTGATAGTTTACCTTCGGACCAATCCTGAGACTTGTTACCAG AGGTTAAAGAAGAGATGCAGGGAAGAGGAGAAGGTCATTCCGCTGGAATACCTGGAAGCA ATTCACCATCTCCATGAGGAGTGGCTCATCAAAGGCAGCCTTTTCCCCATGGCAGCCCCT GTTCTGGTGATTGAGGCTGACCACCACATGGAGAGGATGTTAGAACTCTTTGAACAAAAT CGGGATCGAATATTAACTCCAGAGAATCGGAAGCATTGCCCATAG
Restriction Sites:	Please inquire
ACCN:	NM_001172643
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.

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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:	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_001172643.1, NP_001166114.1
RefSeq Size:	4678 bp
RefSeq ORF:	705 bp
Locus ID:	7084
UniProt ID:	O00142
Cytogenetics:	16q21
Protein Families:	Druggable Genome
Protein Pathways:	Drug metabolism - other enzymes, Metabolic pathways, Pyrimidine metabolism
Gene Summary:	This gene encodes a deoxyribonucleoside kinase that specifically phosphorylates thymidine, deoxycytidine, and deoxyuridine. The encoded enzyme localizes to the mitochondria and is required for mitochondrial DNA synthesis. Mutations in this gene are associated with a myopathic form of mitochondrial DNA depletion syndrome. Alternate splicing results in multiple transcript variants encoding distinct isoforms, some of which lack transit peptide, so are not localized to mitochondria. [provided by RefSeq, Dec 2012] 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 not localized to mitochondria, and it has a distinct N-terminus and is shorter than 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.