

Product datasheet for **SC319446**

RNase H1 (RNASEH1) (NM_002936) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: RNase H1 (RNASEH1) (NM_002936) Human Untagged Clone
Tag: Tag Free
Symbol: RNase H1
Synonyms: H1RNA; PEOB2; RNH1
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC (PS100020)
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_002936.3
 GTTGAGCGCCGGCGGCTCGCGCCACGCTGGGCCGGGAGTCGAAATGCTTCCCGGTGCCG
 GGAGTGAGCGATGAGCTGGCTTCTGTTCTGGCCACAGAGTCGCCTTGGCCGCCTTGCC
 CTGCCGCGCGGCTCTCGCGGGTTCGGGATGTTCTATGCCGTGAGGAGGGCCGCAAGAC
 CGGGGTCTTTCTGACCTGGAATGAGTGCAGAGCACAGGTGGACCGTTTCTGCTGCCAG
 ATTTAAGAAGTTTGCCACAGAGGATGAGGCCTGGGCCTTTGTCAGGAAATCTGCAAGCCC
 GGAAGTTTCAGAAGGGCATGAAAATCAACATGGACAAGAATCGGAGGCGAAAGCCAGCAA
 GCGACTCCGTGAGCCACTGGATGGAGATGGACATGAAAGCGCAGAGCCGTATGCAAAGCA
 CATGAAGCCGAGCGTGGAGCCGGCGCCTCCAGTTAGCAGAGACACGTTTTCTACATGGG
 AGACTTCGTCGTCGTCTACTGATGGCTGCTGCTCCAGTAATGGGCGTAGAAGGCCGCG
 AGCAGGAATCGGCGTTTACTGGGGCCAGGCCATCCTTTAAATGTAGGCATTAGACTTCC
 TGGGCGCAGACAAACCAAGAGCGGAAATTCATGCAGCCTGCAAAGCCATTGAACAAGC
 AAAGACTCAAAACATCAATAAACTGGTTCTGTATACAGACAGTATGTTTACGATAAATGG
 TATAACTAACTGGTTCAAGGTTGGAAGAAAAATGGGTGGAAGACAAGTCAGGGGAAAGA
 GGTGATCAACAAAGAGGACTTTGTGGCACTGGAGAGGCTTACCCAGGGGATGGACATTCA
 GTGGATGCATGTTCTCGGTCATTCGGGATTTATAGGCAATGAAGAAGCTGACAGATTAGC
 CAGAGAAGGAGCTAAACAATCGGAAGACTGAGCCATGTGACTTTAGTCCTTGGGAGA
 TGAGCCAGCGGCTGTCTTGCTGCCTGTACTTACTGGTGTGAAAAATAGCCTGCAGGTAGG
 ACCATTGCAGTGATGGGAGATGCGTCTTTCACACGGAATCAGGCACAGTGGCCTTCTGT
 GACATGTGTTTATAAAAAATGGTTAAGTATATAATAAATTGAACATCTTTGAGATTGGAG
 AAAAAAAAAAAAAAAAAA

Restriction Sites: Please inquire
ACCN: NM_002936



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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).
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_002936.3</u> , <u>NP_002927.2</u>
RefSeq Size:	1648 bp
RefSeq ORF:	861 bp
Locus ID:	246243
UniProt ID:	<u>O60930</u>
Cytogenetics:	2p25.3
Domains:	rnaseH
Protein Pathways:	DNA replication

Gene Summary:

This gene encodes an endonuclease that specifically degrades the RNA of RNA-DNA hybrids and plays a key role in DNA replication and repair. Alternate in-frame start codon initiation results in the production of alternate isoforms that are directed to the mitochondria or to the nucleus. The production of the mitochondrial isoform is modulated by an upstream open reading frame (uORF). Mutations in this gene have been found in individuals with progressive external ophthalmoplegia with mitochondrial DNA deletions, autosomal recessive 2. Alternative splicing results in additional coding and non-coding transcript variants. Pseudogenes of this gene have been defined on chromosomes 2 and 17. [provided by RefSeq, Jul 2017]

Transcript Variant: This variant (1) encodes two isoforms due to the use of alternative translation initiation codons. The longer isoform (1) is derived from the upstream AUG start codon, while the shorter isoform (2) is derived from the downstream AUG start codon. This RefSeq represents the longer isoform (1), which is a mitochondrial protein (see details in PMID: 20823270). 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.