

Product datasheet for **RN203228**

Aco1 (NM_017321) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aco1 (NM_017321) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Aco1
Synonyms:	Acon1; AH; IRP1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >RN203228 representing NM_017321
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAAGAATCCATTTGCCACCTTGCCGAGCCCTTGACCCTGCACAGCCAGAAAGAAATCTTCAACT
 TGAATAAATTGGAGGACTCAAGATATGGACGCTTACCGTTCTCTATCAGAGTTCTCCTGGAGGCCCGCT
 TCGGAAGTGTGACGAGTTTTTGGTGAAGAAGAATGACATTGAGAATATCCTGAACTGGAGTATCATGCAG
 CATAAGAGCATAGAAGTGCCGTTAAGCCAGCCGAGTCATACTGCAGGACTTTACGGGCGTGCCTGCTG
 TGGTTGATTTTGCAGCAATGCGCGATGCTGTGAAGAAGTTGGGAGGAAATCCAGAGAAAAAAACCCCTGT
 CTGCCCGCTGACCTTGAATCGATCATTCCATCCAGGTTCAATTTCAACAGAAGGCGAGACAGTTTGCAG
 AAGAATCAAGACCTGGAATTTGAAAGGAATAGAGAACGATTTGAATTTTTAAAGTGGGGTCCCAGGCCCT
 TTTGCAACATGAGGATTATTCCTCTGGCTCAGGAATTATCACCAAGTGAATCTGGAGTATTTGGCAAG
 AGTAGTGTGGATCAGGATGGATGTTACTACCCAGATAGCCTCGTGGGCACAGATTCTCACACCACCATG
 ATTGATGGTCTGGGAGTTCTGGTTGGGGTGTAGGTGGTATTGAAGCAGAAGCTGTCATGCTGGGTGAGC
 CAATCAGCATGGTGTCTCCCGAGGTGATTGGCTACAAGCTGATGGGAAGCCTCACCCCTCTGGTAACCTC
 CACGGACATTGTGCTCACCATTACCAAGCACCTCCGACAAGTTGGGGTCTGGGCAAATTCGTGGAGTTT
 TTCGGGCCAGGAGTGGCCAGCTGTCCATTGCTGACCGAGCTACGATTGCCAACATGTGCCCAGAGTACG
 GCGCGACGGCAGCCTTCTCCCGGTCGACGACGTTAGCATCGCGTACCTGGTGCAGACAGGTCGTGAGGA
 AGACAAAGTAAAGCACATTAAGAGTATCTTCAGGCTGTAGGCATGTTTCGAGACTTCAGTGACTCCTCT
 CAAGACCCAGACTTCACCTCAGGTCGTGGAGTTAGATTTGAAAACAGTTGTGCCTTGCTGCAGTGGACCTA
 AAAGACCTCAGGACAAAGTTGCTGTCTGAGATTGAAAAGGACTTTGAAAAGCTGCCTTGGAGCCAAAG
 AGGATTTAAAGGTTTTCAAGTTGCTCCAGACCATCACAATGACCACAAGACGTTTTATCTATAACGACAGT
 GAATTCACCTCTTGCTCATGGCTCCGTGGTGTGATCGCCGCCATCACTAGCTGCACAAACACCAGCAATCCGT
 CCGTGATGTTAGGCGCAGGATTGTAGCAAAGAAAGCCGTAGAGGCTGGCCTGAATGTGAAGCCTTACGT
 CAAAACAGCCTGTCTCCTGGGAGTGGAGTGGTACCTACTACCTTCGAGAGAGTGGAGTCATGCCTTAC
 CTGTCCCAGTTAGGGTTTACGTTGGTGGCTACGGCTGCATGACCTGCATCGGCAACAGTGGACCCCTCC
 CCGAACCTGTGGTGGAGGCTATCACCCAGGAGACCTTGTGGCTGTTGGGGTACTGTCTGAAAACAGGAA
 TTTTGAAGGACGAGTCCATCCTAACACCCGGGCCAACTACTTAGCATCTCCCCACTAGTAAATAGCATAT
 GCAATTGCAGGCACCGTCAGGATCGACTTCGAGAAAGAGCCTTTGGGAGTGAACGCACAGGGCCAAACAG
 TGTTTTCTGAAGGATATCTGGCCAACTCGAGATGAGATCCAGGAGTGGAGCGGAAGTATGTCATCCCCGG
 CATGTTCAAGGAGTCTATCAGAAGATAGAGACTGTAACAAAAGCTGGAATGCCTTAGCAGCCCTTCA
 GAGAAGCTGTATGCGTGGAAACCCCAAGTCTACTTATATCAAGTACCCGCCATTCTTTGAAAGCTTGACTT
 TAGATCTCCAGCCCCCAAGTCTATAGTGGATGCCTATGTGCTACTAAATCTAGGAGATTCGTAACAAC
 GGACCATATCTCTCCAGCGGGGAACATTGCAAGAAACAGCCCTGCCGCTCGTACTTGACGAACAGAGGC
 CTGACGCCACGAGATTTCACTCCTACGGCTCCCGCCGGGTACGACGCCATCATGGCACGGGGGACAT
 TTGCCAACATTCGCTTGTGAACAAGTTTCTGAACAAGCAGGCCCTCAGACTGTCCACCTTCTTTCAGG
 AGAAACCTCGATGTGTTTCGATGCGCTGAGCGGTACCAGCAGGCTGGACTTCCCCTGATTTCTGGCT
 GGCAAAGAGTACGGTTACGGCAGCTCCCGAGACTGGGCAGCCAAAGTCTTTCTGCTGGGAATCAAAG
 CTGTCTGGCAGAGAGCTACGAGCGCACTCACTGCAGCAACCTGGTTGGCATGGGGTGTATCCCCCTTGA
 GTATCTCCCCGGCGAAACTGCAGACTCTCTGGACTCACGGTTCGGGAAAGGTACACGATCCACATTCCC
 GAACACCTTAAGCCCCGATGAAGGTTTCAGATAAAGCTGGACACCGGGAAGACCTTCCAGGCCGTGATGA
 GGTTTCGACACCGAGTGGAGCTCACTTACTTCCACAATGGAGGCATCCTGAACTACATGATCCGAAAGAT
 GGCCAGTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul
ACCN: NM_017321

Insert Size:	2670 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).
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_017321.1</u> , <u>NP_059017.1</u>
RefSeq Size:	3564 bp
RefSeq ORF:	2670 bp
Locus ID:	50655
UniProt ID:	<u>Q63270</u>
Cytogenetics:	5q22
Gene Summary:	This gene encodes a member of the aconitase/IPM isomerase protein family. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Depending on iron levels in the cytosol, the encoded protein can function as either an aconitase enzyme or as an mRNA binding protein. When cellular iron levels are high, the encoded protein functions as an aconitase, an essential enzyme in the TCA cycle that catalyzes the conversion of citrate to isocitrate. When cellular iron levels are low, the encoded protein regulates iron uptake and utilization by binding to iron-responsive elements in the untranslated regions of mRNAs for genes involved in iron metabolism [provided by RefSeq, Jan 2014]