

Product datasheet for SC116886

ADA (NM_000022) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ADA (NM_000022) Human Untagged Clone
Tag:	Tag Free
Symbol:	ADA
Synonyms:	ADA1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC116886 sequence for NM_000022 edited (data generated by NextGen Sequencing)

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ATGGCCCAGACGCCCGCTTCGACAAGCCCAAAGTAGAACTGCATGTCCACCTAGACGGA
TCCATCAAGCCTGAAACCATCTTATACTATGGCAGGAGGAGGGATCGCCCTCCAGCT
AACACAGCAGAGGGGCTGCTGAACGTCATTGGCATGGACAAGCCGCTCACCCCTCCAGAC
TTCCTGGCCAAGTTTGACTACTACATGCCTGCTATCGCGGGCTGCCGGGAGGCTATCAA
AGGATCGCCTATGAGTTTGTAGAGATGAAGGCCAAAGAGGGCGTGGTGTATGTGGAGGTG
CGGTACAGTCCGCACCTGCTGGCCAACCTCAAAGTGGAGCCAATCCCCTGGAACCAAGCT
GAAGGGGACCTCACCCAGACGAGGTGGTGGCCCTAGTGGCCAGGGCCTGCAGGAGGGG
GAGCGAGACTTCGGGGTCAAGGCCCGGTCCATCCTGTGCTGCATGCGCCACCAGCCCAAC
TGGTCCCCAAGGTGGTGGAGCTGTGTAAGAAGTACCAGCAGCAGACCGTGGTGGCCATT
GACCTGGCTGGAGATGAGACCATCCCAGGAAGCAGCCTCTTGCCTGGACATGTCCAGGCC
TACCAGGAGGCTGTGAAGAGCGGCATTCACCGTACTGTCCACGCCGGGGAGGTGGGCTCG
GCCGAAGTAGTAAAAGAGGCTGTGGACATACTCAAGACAGAGCGGCTGGGACACGGCTAC
CACCCCTGGAAGACCAGGCCCTTTATAACAGGCTGCGGCAGGAAAACATGCACTTCGAG
ATCTGCCCTGGTCCAGCTACCTCACTGGTGCCTGGAAGCCGGACACGGAGCATGCAGTC
ATTCCGGCTCAAAAATGACCAGGCTAACTACTCGCTCAACACAGATGACCCGCTCATCTTC
AAGTCCACCCTGGACTGATTACCAGATGACCAAACGGGACATGGGCTTTACTGAAGAG
GAGTTTTAAAAGGCTGAACATCAATGCGGCCAAATCTAGTTTCTCCAGAAAGTAAAAG
AGGGAGCTTCTCGACCTGCTCTATAAAGCCTATGGGATGCCACCTTCAGCCTCTGCAGGG
CAGAACCTCTGA

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Clone variation with respect to NM_000022.2
534 a=>g



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5' Read Nucleotide Sequence: >OriGene 5' read for NM_000022 unedited
 GCAAAAATTGTATACGACTCACTATAGGCGGCCGGAATTCGCACGAGGGGAAAGCCGAG
 CGGCCACCCGAGCCGGCAGAGACCCACCGAGCGCGCGGAGGGAGCAGCGCCGGGGCGCA
 CGAGGGCACCATGGCCCAGACGCCCGCCTTCGACAAGCCCAAAGTAGAACTGCATGTCCA
 CCTAGACGGATCCATCAAGCCTGAAACCATCTTATACTATGGCAGGAGGAGGGGATCGC
 CCTCCAGCTAACACAGCAGAGGGGCTGCTGAACGTCATTGGCATGGACAAGCCGCTCAC
 CCTTCCAGACTTCTGGCCAAGTTTGACTACTACATGCCTGCTATCGCGGGCTGCCGGGA
 GGCTATCAAAAAGGATCGCCTATGAGTTTGTAGAGATGAAGGCCAAAGAGGGCGTGGTGAT
 TTGNGAAGTGGGCGTACAGTCCGCACCTGCTGGCCAACCTCAAAGTGGAGCCAATCCCC
 TGGAAACCAGGCTGAAGGGGACCTCACCCAGACAGGNTGGGTGGCCCTAGTGGGCCAGGG
 GCTGCAGGAGNGGAGCGAGACTTCGGGGTCAAGGCCCGTCCATCCTGTGCTGCATGCG
 CCACCAGCCAACTGGTCCCAAGGNTGGGTGGAGCTGTGTAAGAAGTACCAGCAGCAG
 ACCGGTGGTGGCCATTGACCTGGCTGGGAGATGAGACCATCCCCAGAAGCAGCCTCTTGC
 CTGGACATGTCCAGCCTACCAGNAGGCTTGTGAAGAAGCGCATTACCGTACTGCCACCG
 GGGGAAGGGGGGCTCGGGCCGAGTGTAAAAGAAGCTGGGGACATACTCAAGACGAGCGG
 TTGGGACACGCTACACACCCTGGAAGACAGGCCCTTATACAGCTCGGGCAGGAACTGCC
 TTTCAGATTTGCCCTGGCCACTACTACTTGGGCCTGAAACCGACCCGGACAGGATATTTG
 GGTA

3' Read Nucleotide Sequence: >OriGene 3' read for NM_000022 unedited
 GGGGGTGGGCCCCACNNACCTTTTCCNNNNNGNNTTACTGTGNACCCGGCCGCTTTTNA
 NATTTTTTTTTTTTGCATGCCACCAGCCTGGGCTTCTTTATTGAGCACCAGNATTTTCAGT
 ACAAGTTGCCACAGAAGGAGGGTTTCAGATTCAACCATGCCCATGTGCAAGGGCGCTGGT
 CCTTGGCCAGGGCACATAATCAGAGAAGTGACCGGCCATGCCGAGGTATACGTGTGTGC
 AGAAATGGACACATAGGGTTTCAGGAGCATCAGTAACTGACTATTGAGATCATGGTCTTCT
 TGGAAAGGAATAAATGTAATAAATGTTGCTCAGCCCCACAGAGTTGGGGTGAATCCACAGGG
 TGAAGGCTTGGAGGAGTGGCGTCTTCAGAGGTTTGCCTGCAGAGGCTGAAGGTGGCAT
 CCCATAGGCTTTATAGAGCAGGTCGAGAAGTCCCTCTTTTCATCTTCTGGGAGGAACT
 AGATTTGGCCGCATTGATGTTTCCAGCCTTTTAACTCCTCTTCAGTAAAGCCCATGTCCCG
 TTTGGTCATCTGGTAATCAGTGTCCAGGGTGGACTTGAAGATGAGCGGGTTCATCTGTGTT
 GAGCGAGTAGTTAGCCTGGTCAATTTTTGAGCCGAATGACTGCATGCTCCGTGTCGGGCTT
 CCANGCACCAGTGAGGTAGCTGGACCAGGGCAGATCTCGAAGTGCATGTTTTCTGCCG
 CAGCCTGTATAAAAAGGCTGGTCTTCCAGGGTGTGGTAGCCGTGTCCCAGCCGCTCTGT
 CTTGAGTATGTCCACAGCCTTTTTTACTACTTTTCGNCGAGCCACCTCCCCGCCGTGGAC
 AGTACCGGGAATGCCGCTCTTACAGGCTCCTGGTAGCCCTGACATGTTTCAGGCAAGAGCT
 GCTTCTGGGAGGCTCATTTCCAGCCAGTCATGGCCACACGGCTGCTG

Restriction Sites: NotI-NotI

ACCN: NM_000022

Insert Size: 2800 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

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_000022.2](#), [NP_000013.2](#)

RefSeq Size: 1566 bp

RefSeq ORF: 1092 bp

Locus ID: 100

UniProt ID: [P00813](#)

Cytogenetics: 20q13.12

Domains: A_deaminase

Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Primary immunodeficiency, Purine metabolism

Gene Summary: This gene encodes an enzyme that catalyzes the hydrolysis of adenosine to inosine in the purine catabolic pathway. Various mutations have been described for this gene and have been linked to human diseases related to impaired immune function such as severe combined immunodeficiency disease (SCID) which is the result of a deficiency in the ADA enzyme. In ADA-deficient individuals there is a marked depletion of T, B, and NK lymphocytes, and consequently, a lack of both humoral and cellular immunity. Conversely, elevated levels of this enzyme are associated with congenital hemolytic anemia. [provided by RefSeq, Sep 2019]