

## Product datasheet for **SC115257**

### AK2 (NM\_013411) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	AK2 (NM_013411) Human Untagged Clone
Tag:	Tag Free
Symbol:	AK2
Synonyms:	ADK2
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC115257 sequence for NM_013411 edited (data generated by NextGen Sequencing)

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ATGGCTCCCAGCGTGCCAGCGGCAGAACCCGAGTATCCTAAAGGCATCCGGGCCGTGCTG
CTGGGGCCTCCCGGGCCGGTAAAGGGACCCAGGCACCCAGATTGGCTGAAAATTCTGT
GTCTGCCATTTAGCTACTGGGGACATGCTGAGGGCCATGGTGGCTTCTGGCTCAGAGCTA
GGAAAAAGCTGAAGGCAACTATGGATGCTGGGAACTGGTGAAGTGAATGGTAGTG
GAGCTCATTGAGAAGAATTTGGAGACCCCTTGTGCAAAAATGGTTTTCTTCTGGATGGC
TTCCCTCGGACTGTGAGGCAGGCAGAAATGCTCGATGACCTCATGGAGAAGAGGAAAGAG
AAGCTTGATTCTGTGATTGAATTCAGCATCCAGACTCTCTGCTGATCCGAAGAATCACA
GGAAGGCTGATTCACCCAAGAGTGGCCGTTTCTACCACGAGGAGTTCAACCTCCAAAA
GAGCCCATGAAAGATGACATCACCGGGGAACCCTTGATCCGTCGATCAGATGATAATGAA
AAGGCCTTGAAAATCCGCTGCAAGCCTACCACACTCAAACCACCCCACTCATAGAGTAC
TACAGGAAACGGGGGATCCACTCCGCCATCGATGCATCCCAGACCCCGATGTCGTGTTCC
GCAAGCATCCTAGCAGCCTTCTCAAAGCCACATCCTAG
```

Clone variation with respect to NM\_013411.4



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<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_013411 unedited GACTCACTATAGGGCGGCCGGAATTCGGCACGAGGCCTCGTGCCGAATTCGGCACGAGG TGGCAGTGAGAGACTTCGGCGGACATGGCTCCCAGCGTGCCAGCGGCAGAAACCCGAGTAT CCTAAAGGCATCCGGGCCGTGCTGCTGGGGCCTCCCGGGCCGGTAAAGGGACCCAGGCA CCCAGATTGGCTGAAAACCTCTGTGTCTGCCATTTAGCTACTGGGACATGCTGAGGGCC ATGGTGGCTTCTGGCTCAGAGCTAGGAAAAAGCTGAAGGCAACTATGGATGCTGGGAAA CTGGTGAGTGATGAAATGGTAGTGGAGCTCATTGAGAAGAATTTGGAGACCCCTTGTC AAAAATGGTTTTTCTTGATGGCTTCCCTCGGACTGTGAGGCAGGCAGAAATGCTCGAT GACCTCATGGAGAAGAGGAAAGAGAAGCTTATTCTGTGATTGAATTCAGCATCCCAGAC TCTCTGCTGATCCGAAGAATCACAGGAAGGCTGATTCACCCCAAGAGTGGCCGTTCTAC CACGAGGAGTTCAACCTCCAAAAGAGCCCATGAAAGATGACATCACCGNGAACCTTG ATCCGTCGATCAGATGATAATGAAAAGGCCTTGAAATCCGNNCTGCAGCCTACCACACT CAAACCACCCACTCATAGAGTACTACAGGAAACGGGGATCCACTCCGNCATCGATGCA TCCCAGACCCCCGATGTCGTGTTGCAAGCATCCTAGCAGCCTTCTCAAGCCACATCCT AGTATCAGAGGGCCAGCGAGACTGCACACTGCTCATCACCCCGCGCGTGATCCCTGCTC TTAGTGTGGGCAAGGGGAAGGNTGTTANGNTGAAGATGTGAGGNAGGNTGNNTAGGG CTANNAGATACTNNGACACAGCAGTGTATTGTANTGTGCAGTTTCTTATACTAGGGGAGA GTTTTAAGTGTAGGAANAT
<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_013411 unedited TGACCGCGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTACAAATTTTAACAT ATTTTATTGATTTAGGGCCAAACAAGGCAGCATTGGTCAGTTAAGAAAGGCACCTCAT TGAAAATAATACATCACAGTGCTGTTGAGTGATCCAGTCACAGGATTTGAGAATGGAAA GGACAATCTTTGGATGACATAGCTTAGGACACTTGCTCATTTATTTAAAAGAGTCCCTTC ACACAGTGCAGATAAAAGAAGGCAAGAGCATAGGATTGTGGCATGTGCTGGGTAGCTGTG AGAGGTTACTCATGAAAGTAGGTAGCCTAGTAAATTAGTGGTAAGTCAGGGGAAGGGAAT CAGCCTCCCTTCCATTTTATTCCTTCCCTTCCCTTCCCTTCCCTTCCCTTCCCTTCCCTT TTGAGCCACCATCCCTATGAATACACCTTACATCTCTTTCAAATGTGGAGATGGTTTTTT GATCTTACAGTGTGTGGAACCGGAGTCAGTAATCAAAGCTCCCTGTTCCAAGCTATAGAC AGACAGGACAACAATTTGATTTCTGTACTCTTGGTCTGGAACCCATGGGTTCTGAGAT AAAAGCTGAGGTCTTAGAGCACTGGCTTAAAAAATATTTTACCAGTCCAGAGTAAATG AAAACCCGATTCCTTAGNAAATATATTGGTCTATTTCTACCCCACTCCAGCATGGTG TTTTTTAAAAATTAATTTTCCCTTACACTTTAAACTTACCTATGTATAAAAGAAGTGC CACACTCAATAAAGTGTGTTTCCAATATTCTTTGAACCCCTACACACCCTTCCTT AACTTTCTTACCTTGACACCCCTCCCTTTTGCACAAACCTAAAACAGGAATCACCCGCGG
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_013411
<b>Insert Size:</b>	1880 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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\\_013411.2](#), [NP\\_037543.1](#)

**RefSeq Size:** 2146 bp

**RefSeq ORF:** 699 bp

**Locus ID:** 204

**UniProt ID:** [P54819](#)

**Cytogenetics:** 1p35.1

**Domains:** ADK, ADK\_lid

**Protein Families:** Druggable Genome

**Protein Pathways:** Metabolic pathways, Purine metabolism

**Gene Summary:** Adenylate kinases are involved in regulating the adenine nucleotide composition within a cell by catalyzing the reversible transfer of phosphate groups among adenine nucleotides. Three isozymes of adenylate kinase, namely 1, 2, and 3, have been identified in vertebrates; this gene encodes isozyme 2. Expression of these isozymes is tissue-specific and developmentally regulated. Isozyme 2 is localized in the mitochondrial intermembrane space and may play a role in apoptosis. Mutations in this gene are the cause of reticular dysgenesis. Alternate splicing results in multiple transcript variants. Pseudogenes of this gene are found on chromosomes 1 and 2.[provided by RefSeq, Nov 2010]  
Transcript Variant: This variant (2), also known as AK2B, differs in the 3' UTR and coding sequence compared to variant 1. The encoded isoform (b) is shorter and has a distinct C-terminus compared to isoform a. 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.