

## Product datasheet for **RC208949**

### Adenine Nucleotide Translocator 2 (SLC25A5) (NM\_001152) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Adenine Nucleotide Translocator 2 (SLC25A5) (NM_001152) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Adenine Nucleotide Translocator 2
Synonyms:	2F1; AAC2; ANT2; T2; T3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC208949 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGACAGATGCCGCTGTGTCTTCGCAAGGACTTCTGGCAGGTGGAGTGGCCGAGCCATCTCCAAGA  
CGGCGGTAGCGCCATCGAGCGGGTCAAGCTGCTGCTGCAGGTGCAGCATGCCAGCAAGCAGATCACTGC  
AGATAAGCAATACAAAGGCATTATAGACTGCGTGGTCCGTATCCCAAGGAGCAGGGAGTTCTGTCCTTC  
TGGCGCGGTAACCTGGCCAATGTCATCAGATACTCCCCACCCAGGCTCTTAACCTCGCCTTCAAAGATA  
AATACAAGCAGATCTTCTGGGTGGTGTGGACAAGAGAACCCAGTTTTGGCGCTACTTTGCAGGGAATCT  
GGCATCGGGTGGTCCCGCAGGGGCCACATCCCTGTGTTTTGTGTACCCTCTTGATTTGCCCGTACCCGT  
CTAGCAGCTGATGTGGTAAAGCTGGAGCTGAAAGGGAATTCGAGGCCTCGGTGACTGCCTGGTTAAGA  
TCTACAAATCTGATGGGATTAAGGGCCTGTACCAAGGCTTTAACGTGTCTGTGCAGGGTATTATCATCTA  
CCGAGCCGCTACTTCGGTATCTATGACTGCAAAGGGAATGCTTCCGGATCCCAAGAACACTCACATC  
GTCATCAGCTGGATGATCGCACAGACTGCTACTGCTGTTGCCGGTTGACTTCTATCCATTTGACACCG  
TTCGCCCGCATGATGATGCAGTCAGGGCGCAAAGGAACTGACATCATGTACACAGGCACGCTTGACTG  
CTGGCGGAAGATTGCTCGTGATGAAGGAGGCAAAGCTTTTTCAAGGGTGCATGGTCCAATGTTCTCAGA  
GGCATGGTGGTCTTTGTGCTTGTCTTGATGATGAAATCAAGAAGTACACA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC208949 protein sequence  
 Red=Cloning site Green=Tags(s)

MTDAAVSFAKDFLAGGVAAAISKTAVAPIERVKLLLQVQHASKQITADKQYKGIIDCVVRIPKEQGVLSF  
 WRGNLANVIRYFPTQALNFAFKDKYKQIFLGGVDKRTQFWRYFAGNLASGGAAGATSLCFVYPLDFARTR  
 LAADVKGAGAEREFRGLGDCLVKIYKSDGIKGLYQGFNVSVQGI IYRAAYFGIYDTAKGMLPDPKNTHI  
 VISWMI AQTVTAVAGLTSYPFDTVRRRMMMQSGRKGTDIMYTGTLDCWRK IARDEGGKAFKGAWSNVLR  
 GMGGAFVLLVLYDEIKKYT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6213\\_a09.zip](https://cdn.origene.com/chromatograms/mk6213_a09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001152

**ORF Size:** 894 bp

**OTI Disclaimer:** 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](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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\\_001152.1](#), [NP\\_001143.1](#)

**RefSeq Size:** 1351 bp

**RefSeq ORF:** 897 bp

**Locus ID:** 292

**UniProt ID:** [P05141](#)

**Cytogenetics:** Xq24

**Domains:** mito\_carr

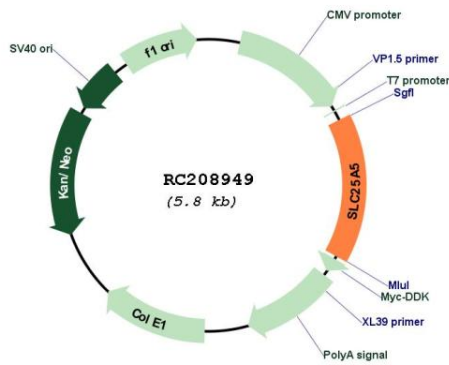
**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Calcium signaling pathway, Huntington's disease, Parkinson's disease

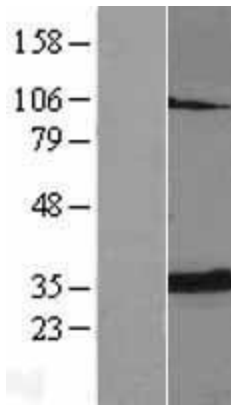
**MW:** 32.9 kDa

**Gene Summary:** This gene is a member of the mitochondrial carrier subfamily of solute carrier protein genes. The product of this gene functions as a gated pore that translocates ADP from the cytoplasm into the mitochondrial matrix and ATP from the mitochondrial matrix into the cytoplasm. The protein forms a homodimer embedded in the inner mitochondria membrane. Suppressed expression of this gene has been shown to induce apoptosis and inhibit tumor growth. The human genome contains several non-transcribed pseudogenes of this gene.[provided by RefSeq, Jun 2013]

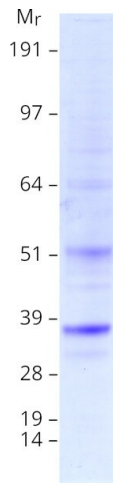
Product images:



Circular map for RC208949



Western blot validation of overexpression lysate (Cat# [LY420098]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208949 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SLC25A5 protein (Cat# [TP308949]). The protein was produced from HEK293T cells transfected with SLC25A5 cDNA clone (Cat# RC208949) using MegaTran 2.0 (Cat# [TT210002]).