

## Product datasheet for **RG238065**

### Adenosine Receptor A2a (ADORA2A) (NM\_001278499) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Adenosine Receptor A2a (ADORA2A) (NM_001278499) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ADORA2A
Synonyms:	A2aR; ADORA2; RDC8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG238065 representing NM_001278499. Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTGTGAACCGTCAGAATTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
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GGAGTGTGCCAGAGCCCTGGCTAGATGACCCCTGGCCAGGATGGAGCAGGAGTGTCC
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
```



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Protein Sequence: >Peptide sequence encoded by RG238065  
 Blue=ORF Red=Cloning site Green=Tag(s)

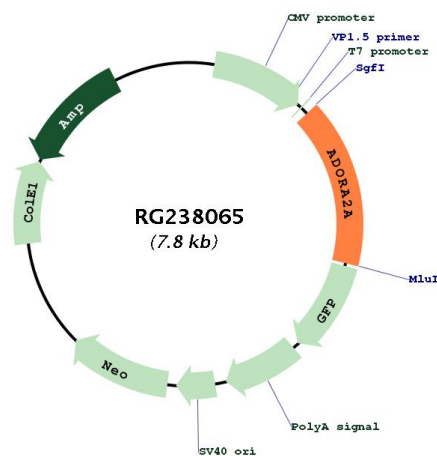
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 FCAACHGCLFIACFVLLTQSSIFSLLAIAIDRYAIRIPLRYNGLVTGTRAKGIIAICWVLSFAIGLT  
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 LKQMSQPLPGERARSTLQKEVHAAKSLAIIIVGLFALCWLPLHIINCFTEFCPCDCHAPLWMLYLAIVL  
 SHTNSVVPFIYAYRIRREFRQTRFKIIRSHVLRQEQPFKAAGTSARVLAAHGSDGEQVSLRLNGHPPGV  
 WANGSAPHPERRNGYALGLVSGGSAQESQNGTGLPDVELLSHELKGVCPPEPGLDDPLAQDGAGVS  
**TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV**  
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 SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMHFKSAIHPSILQNGGPMFA  
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



<b>ACCN:</b>	NM_001278499
<b>ORF Size:</b>	1236 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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).
<b>RefSeq:</b>	<a href="#">NM_001278499.1</a> , <a href="#">NP_001265428.1</a>
<b>RefSeq Size:</b>	2563 bp
<b>RefSeq ORF:</b>	1239 bp
<b>Locus ID:</b>	135
<b>UniProt ID:</b>	<a href="#">P29274</a>
<b>Cytogenetics:</b>	22q11.23
<b>Protein Families:</b>	Druggable Genome, GPCR, Transmembrane
<b>Protein Pathways:</b>	Calcium signaling pathway, Neuroactive ligand-receptor interaction, Vascular smooth muscle contraction
<b>MW:</b>	44.7 kDa
<b>Gene Summary:</b>	This gene encodes a member of the guanine nucleotide-binding protein (G protein)-coupled receptor (GPCR) superfamily, which is subdivided into classes and subtypes. The receptors are seven-pass transmembrane proteins that respond to extracellular cues and activate intracellular signal transduction pathways. This protein, an adenosine receptor of A2A subtype, uses adenosine as the preferred endogenous agonist and preferentially interacts with the G(s) and G(olf) family of G proteins to increase intracellular cAMP levels. It plays an important role in many biological functions, such as cardiac rhythm and circulation, cerebral and renal blood flow, immune function, pain regulation, and sleep. It has been implicated in pathophysiological conditions such as inflammatory diseases and neurodegenerative disorders. Alternative splicing results in multiple transcript variants. A read-through transcript composed of the upstream SPECC1L (sperm antigen with calponin homology and coiled-coil domains 1-like) and ADORA2A (adenosine A2a receptor) gene sequence has been identified, but it is thought to be non-coding. [provided by RefSeq, Jun 2013]