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Product datasheet for RC202452

GM2A (NM_000405) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GM2A (NM_000405) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GM2A
Synonyms:	GM2-AP; SAP-3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

```
>RC202452 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAGTCCCTGATGCAGGCTCCCCTCCTGATCGCCCTGGGCTTGCTTCTCGCGGCCCCTGCGCAAGCCC
ACCTGAAAAAGCCATCCCAGCTCAGTAGCTTTTCCTGGGATAACTGTGATGAAGGGAAGGACCCTGCGGT
GATCAGAAGCCTGACTCTGGAGCCTGACCCCATCGTCGTTCCTGGAAATGTGACCCTCAGTGTCGTGGGC
AGCACCAGTGTCCCCCTGAGTTCTCCTCTGAAGGTGGATTTAGTTTTGGAGAAGGAGGTGGCTGGCCTCT
GGATCAAGATCCCATGCACAGACTACATTGGCAGCTGTACCTTTGAACACTTCTGTGATGTGCTTGACAT
GTTAATTCCTACTGGGGAGCCCTGCCCAGAGCCCCTGCGTACCTATGGGCTTCCTTGCCACTGTCCCTTC
AAAGAAGGAACCTACTCACTGCCCAAGAGCGAATTCGTTGTGCCTGACCTGGAGCTGCCCAGTTGGCTCA
CCACCGGGAACTACCGCATAGAGAGCGTCCTGAGCAGCAGTGGGAAGCGTCTGGGCTGCATCAAGATCGC
TGCCTCTCTAAAGGGCATA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA
```

Protein Sequence:

```
>RC202452 protein sequence
Red=Cloning site Green=Tags(s)

MQSLMQAPLLIALGLLLAAPAQAHLKKPSQLSSFSWDNCDEGKDPAVIRSLTLEPDPIVVPGNVTLSVVG
STSVPLSSPLKVDLVLEKEVAGLWIKIPCTDYIGSCTFEHFCDVLDMLIPTGEPCPEPLRTYGLPCHCPF
KEGTYSLPKSEFVVPDLELPSWLTTGNYRIESVLSSSGKRLGCIKIAASLKGI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV
```

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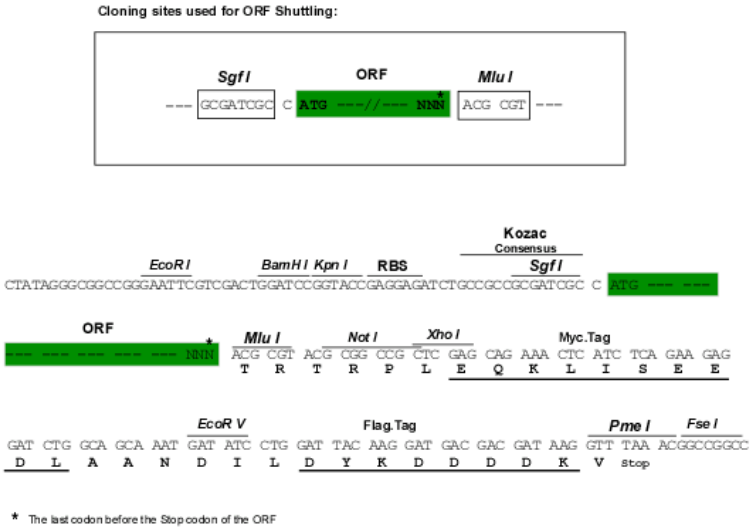
Chromatograms: https://cdn.origene.com/chromatograms/mk6054_h10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000405

ORF Size: 579 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_000405.5

RefSeq Size: 3690 bp

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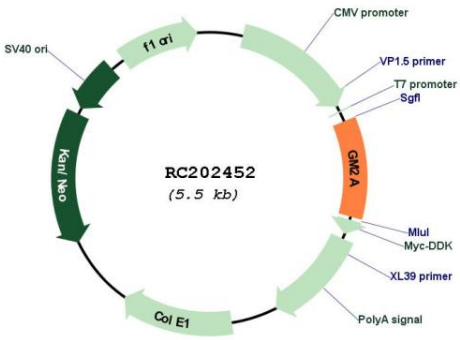
RefSeq ORF:	582 bp
Locus ID:	2760
UniProt ID:	P17900
Cytogenetics:	5q33.1
Domains:	ML
Protein Families:	Druggable Genome
Protein Pathways:	Lysosome
MW:	20.8 kDa
Gene Summary:	This gene encodes a small glycolipid transport protein which acts as a substrate specific co-factor for the lysosomal enzyme beta-hexosaminidase A. Beta-hexosaminidase A, together with GM2 ganglioside activator, catalyzes the degradation of the ganglioside GM2, and other molecules containing terminal N-acetyl hexosamines. Mutations in this gene result in GM2-gangliosidosis type AB or the AB variant of Tay-Sachs disease. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2009]

Product images:



Circular map for RC202452

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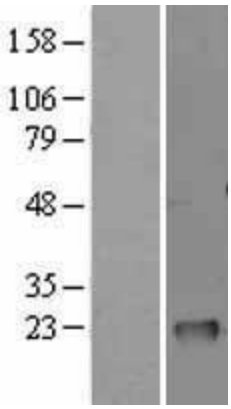
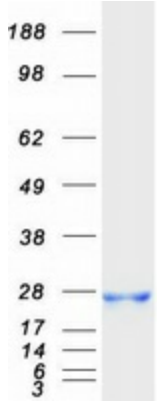


Western blot validation of overexpression lysate (Cat# [LY400143]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202452 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GM2A protein (Cat# [TP302452]). The protein was produced from HEK293T cells transfected with GM2A cDNA clone (Cat# RC202452) using MegaTran 2.0 (Cat# [TT210002]).

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