

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)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGCAGTCCCTGATGCAGGCTCCCCTCCTGATCGCCCTGGGCTTGCTTCTCGGGCCCTGCGCAAGCCC
 ACCTGAAAAGCCATCCCAGCTCAGTAGCTTTTCTGGGATAACTGTGATGAAGGAAGGACCCTGCGGT
 GATCAGAAGCCTGACTCTGGAGCCTGACCCCATCGTCGTTCTGGAAATGTACCCTCAGTGTCTGGGC
 AGCACCAGTGTCCCCTGAGTTCTCTGAAGGTGGATTTAGTTTGGAGAAGGAGGTGGCTGGCCTCT
 GGATCAAGATCCCATGCACAGACTACATTGGCAGCTGTACCTTTGAACACTTCTGTGATGTCTTGACAT
 GTTAATTCCTACTGGGGAGCCCTGCCAGAGCCCTGCGTACCTATGGGCTTCTTGCCACTGTCCCTTC
 AAAGAAGGAACCTACTACTGCCAAGAGCGAATTCGTTGTGCCTGACCTGGAGCTGCCAGTTGGCTCA
 CCACCGGGAACCTACCGCATAGAGAGCGTCTGAGCAGCAGTGGGAAGCGTCTGGGCTGCATCAAGATCGC
 TGCTCTCTAAAGGCATA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC202452 protein sequence
 Red=Cloning site Green=Tags(s)

MQSLMQAPLLIALGLLLAPAQAHLKKPSQLSSFWDNCDEGKDPVIRSLTLEPDPVIVPGNVTL SVVG
 STSVPLSSPLKVDLVLEKEVAGLWIKIPCTDYIGSCTFEHFCDVLDMLIPTGEPCEPLRTYGLPCHCPF
 KEGTYSLPKSEFVVPDLELPSWLTGNYRIESVLSSSGKRLGCIKIAASLKGI

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.

RefSeq: [NM_000405.5](#)

RefSeq Size: 3690 bp

RefSeq ORF: 582 bp

Locus ID: 2760

UniProt ID: [P17900](#)

Cytogenetics: 5q33.1

Domains: ML

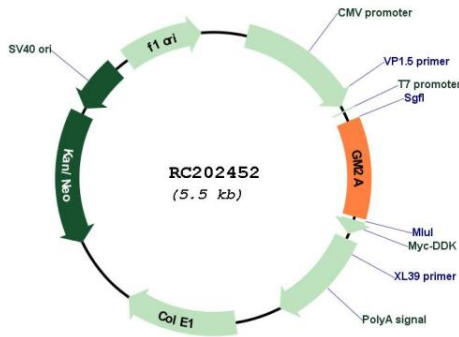
Protein Families: Druggable Genome

Protein Pathways: Lysosome

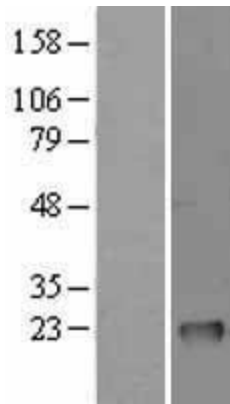
MW: 20.8 kDa

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]

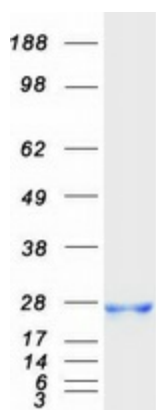
Product images:



Circular map for RC202452



Western blot validation of overexpression lysate (Cat# [LY400143]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected 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]).