

Product datasheet for **RC204458**

GNS (NM_002076) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GNS (NM_002076) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GNS
Synonyms:	G6S
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC204458 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCGGCTCTGCCTCTAGCCCCAGGTCGGCTCCGGCGGGCAGCCCCGCCACCTGCCCTCTGCAGCC
 CAGCGCTGCTACTGCTGGTGTGGGCGGCTGCCTGGGGTCTTCGGGGTGGCTGCGGGAACCCGAGGCC
 CAACGTGGTGTCTCTCACGGACGACCAGGACGAAGTCTCGCGGCATGACACCGCTAAAGAAAACC
 AAAGCTCTCATCGGAGAGATGGGGATGACTTTTTCCAGTGCTTATGTGCCAAGTCTCTGCTGCCCA
 GCAGAGCCAGTATCCTGACAGGAAAGTACCCACATAATCATCACGTTGTGAACAACACTCTGGAGGGAA
 CTGCAGTAGTAAGTCTGGCAGAAGATCCAAGAACCAAATACTTTCCAGCAATTCTCAGATCAATGTGT
 GGTATCAGACCTTTTTGCAGGAAATATTTAAATGAGTACGGAGCCCCAGATGCAGGTGGACTAGAAC
 ACGTTCCTCTGGGTTGGAGTTACTGGTATGCCTGGAAAAGAATTCTAAGTATTATAATTACACCCTGTC
 TATCAATGGGAAGCACGAAGCATGGTAAAACATAGTGTGGACTACCTGACAGATGTTTTGGCTAAT
 GTCTCCTTGGACTTTCTGGACTACAAGTCCAACCTTGGAGCCCTTTCATGATGATCGCCACTCCAGCGC
 CTCATTCCGCTTGGACAGCTGCACCTCAGTACCAGAAGGCTTCCAGAATGTCTTTCACCAAGAAACAA
 GAACCTCAACATCCATGGAACGAACAAGCACTGGTTAATTAGGCAAGCCAAGACTCCAATGACTAATTCT
 TCAATACAGTTTTAGATAATGCATTTAGGAAAAGGTGGCAAACCTCCTCTCAGTTGATGACCTTGTGG
 AGAAACTGGTCAAGAGGCTGGAGTTCACCTGGGGAGCTCAACAACACTTACATCTTCTATACCTCAGCAA
 TGGCTATCACACAGGACAGTTTTCTTGCCAATAGACAAGAGACAGCTGTATGAGTTTGATCAAAGTT
 CCACCTGTTGGTTCGAGGACCTGGGATCAAACCAAATCAGACAAGCAAGATGCTGGTTGCCAACATTGACT
 TGGGCTCTACTATTTGGACATTGCTGGCTACGACCTAAATAAGACACAGATGGATGGTGTCTTATT
 GCCATTTTGAGAGGTGCCAGTAACTTGACCTGGCGATCAGATGTCCTGGTGAATACCAAGGAGAAGGC
 CGTAACGTCACCTGACCCAACATGCCCTCCCTGAGTCCTGGCGTATCTCAATGCTTCCAGACTGTGAT
 GTGAAGATGCTTATAACAATACCTATGCCTGTGTGAGGACAATGTGAGCATTGTGGAATTTGCAGTATTG
 CGAGTTTGTGACAGGAGGTGTTGTAGAAGTCTATAATCTGACTGCAGACCCAGACCAGATCACTAAC
 ATTGCTAAAACCATAGACCCAGAGCTTTAGGAAAGATGAACTATCGGTTAATGATGTTACAGTCTGTT
 CTGGGCCAACCTGTCGCACTCCAGGGTTTTGACCCCGGATACAGGTTTACCCCGTCTCATGTTTCCAG
 CAATCGCGGCAGTGTGAGACTCGAAGATTTTCCAACATCTTCTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC204458 protein sequence
 Red=Cloning site Green=Tags(s)

MRLLPLAPGRLRRGSPRHLPCSPALLLLVLGGCLGVFGVAAGTRRPNVLLLLTDDQDEVLGGMTPLKKT
 KALIGEMGMTFSSAYVPSALCCPSRASILTGYPHNHVNNNTLEGNCSSKSWQKIQEPNTFPAILRSMC
 GYQTFAGKYLNEYGAPDAGGLEHVPLGWSYWYALEKNSKYNYTSLINGKARKHGENYSVDYLDVLAN
 VSLDFLDYKSNFEPFFMMIATPAPHSPWTAAPQYQKAFQNVFAPRNKFNHGHGNTKHWLIRQAKTPMTNS
 SIQFLDNAFRKRWQTLVSDDLVEKLVKRLFTGELNNTYIFYTSDNGYHTGQFSLPIDKRQLYEFDIKV
 PLLVRGPGIKPNQTSKMLVANIDLGPTILDIAGYDLNKTQMDGMSLLPILRGASNLTWRSVDLVEYQGE
 RNVTDPTCPSLSPGVSQCFPDCVEDAYNNTYACVRTMSALWNLQYCEFDQEVFVEVYNLTADPDQITN
 IAKTIDPELLGKMNRYRLMMLQSCSGPTCRTPGVDFPGYRFDPRMLF SNRGSVTRRRFSKHL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6522_e10.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_002076

ORF Size: 1656 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_002076.4](#)

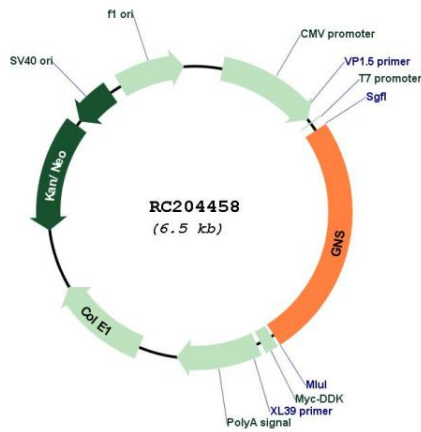
RefSeq Size: 5144 bp

RefSeq ORF: 1659 bp

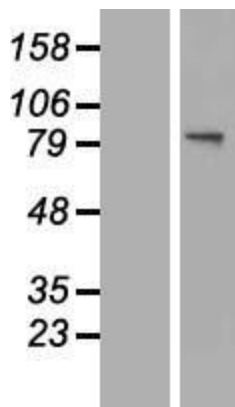
Locus ID: 2799

UniProt ID: [P15586](#)
Cytogenetics: 12q14.3
Domains: Sulfatase
Protein Families: Druggable Genome, Transmembrane
Protein Pathways: Glycosaminoglycan degradation, Lysosome, Metabolic pathways
MW: 62.1 kDa
Gene Summary: The product of this gene is a lysosomal enzyme found in all cells. It is involved in the catabolism of heparin, heparan sulphate, and keratan sulphate. Deficiency of this enzyme results in the accumulation of undegraded substrate and the lysosomal storage disorder mucopolysaccharidosis type IIID (Sanfilippo D syndrome). Mucopolysaccharidosis type IIID is the least common of the four subtypes of Sanfilippo syndrome. [provided by RefSeq, Jul 2008]

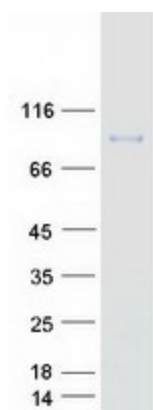
Product images:



Circular map for RC204458



Western blot validation of overexpression lysate (Cat# [LY419554]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204458 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GNS protein (Cat# [TP304458]). The protein was produced from HEK293T cells transfected with GNS cDNA clone (Cat# RC204458) using MegaTran 2.0 (Cat# [TT210002]).