

Product datasheet for **RC202805**

Pancreatic alpha amylase (AMY2A) (NM_000699) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pancreatic alpha amylase (AMY2A) (NM_000699) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pancreatic alpha amylase
Synonyms:	AMY2; PA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC202805 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAAGTCTTTCTGTTGCTTTTACCATTGGGTTCTGCTGGGCTCAGTATTCGCCAAATACACAACAAG
 GACGGACATCTATTGTTTCATCTGTTGAATGGCGATGGGTTGATATTGCTCTTGAATGTGAGCGATATTT
 AGCTCCGAAGGGATTTGGAGGGTTTCAGGTCTCTCCACCAATGAAAATGTTGCAATTTACAACCCTTTC
 AGACCTTGGTGGGAAAGATACCAACCAGTTAGCTATAAATTATGCACAAGATCTGGAAATGAAGATGAAT
 TTAGAAACATGGTACTAGATGTAACAATGTTGGGTTCTGATTTATGTGGATGCTGTAATTAATCATAT
 GTGTGGTAACGCTGTGAGTGCAGGAACAAGCAGTACCTGTGGAAGTACTTCAACCCTGGAAGTAGGGAC
 TTTCCAGCAGTCCCATATTTCTGGATGGGATTTCAATGATGGTAAATGTAAAAGTGAAGTGGAGATATCG
 AGAACTACAATGATGCTACTCAGGTGAGAGATTGCTGCTGACTGGTCTTCTTGATCTTGCACTGGAGAA
 GGATTACGTGCGTTCTAAGATTGCCGAATATATGAACCATCTCATTGACATTGGTGTTCAGGGTTCAGA
 CTTGATGCTTCCAAGCAGATGTGGCCTGGAGACATAAAGGCAATTTTGGACAACTGCATAATCTAAACA
 GTAAGTGGTCCCTGCAGGAAGTAAACCTTTCATTTACCAGGAGGTAATTGATCTGGGTGGTGGACCAAT
 TAAAAGCAGTACTACTTTGGTAAATGGCCGGGTGACAGAAATCAAGTATGGTGCAAACTCGGCACAGTT
 ATTCGCAAGTGGAAATGGAGAGAAGATGTCTTACTTAAAGAAGTGGGAGAAAGGTTGGGGTTTCGTACCTT
 CTGACAGAGCGCTTGTCTTTGTGGATAACCATGACAATCAACGAGGACATGGGGCTGGAGGAGCCTCTAT
 TCTTACCTTCTGGGATGCTAGGCTGTACAAAATGGCAGTTGGATTTATGCTTGTCTCATCCTTACGGATT
 ACACGTAATGTCAAGTACCCTGGCCAAGCAGTTTCAAAAATGGAACGATGTTAATGATTGGGTTG
 GGCCACCAATAATAATGGAGTAATTAAGAAGTACTATTAATCCAGACACTACTTGTGGCAATGACTG
 GGTCTGTGAACATCGATGGCGCCAATAAGGAACATGGTTATTTCCGCAATGTAGTGGATGGCCAGCCT
 TTTACAAATTGGTATGATAATGGGAGCAACCAAGTGGCTTTTGGGAGAGGAAACAGAGGATTCATTGTTT
 TCAACAATGATGACTGGTCATTTTCTTTAACTTTGCAAACTGGTCTTCTGCTGGCACATACTGTGATGT
 CATTTCTGGAGATAAAATTAATGGCAATGCACAGGCATTAATAATTTACGTTTCTGATGATGGCAAAGCT
 CATTTTCTATTAGTAAGTCTGCTGAAGATCCATTTATTGCAATTCATGCTGAATCTAAATTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC202805 protein sequence
 Red=Cloning site Green=Tags(s)

MKFFLLLFTIGFCWAQYSPNTQQGRTSIVHLFEWRWDIALEECERYLAPKGGVQVSPNENVAIYNPF
 RPWWERYQPVSYKLCRSGNEDEFNMVTRCANNVGVRIYVDAVINHMCNAVSAGTSSTCGSYFNPGRD
 FPAVPYSGWDFNDGKCKTSGSDIENYNDATQVRDCLTGLLDLALAEKDYVRSKIAEYMNHLIDIGVAGFR
 LDASKHMWPGDIKAILDKLHNLNSNWFPAKSKPFYQEVIDLGGPEIKSSDYFGNGRVTEFKYGAJLGTV
 IRKWNGEKMSYLKNWEGWGFVPSDRALVVDNHDNQRGHGAGGASILTFWDARLYKMAVGFMLAHPYGF
 TRYMSSYRWRPQFQNGNDVNDWVPPNNGVIKEVTINPDTCGNDWVCEHRWRQIRNMVIFRNVDGQP
 FTNWDYDNGSNQVAFGRGNRGFIVFNDDWSFSLTLQTGLPAGTYCDVISGDKINGNCTGIKIYVSDDGKA
 HFSISNSAEDPFIATHAESKL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6578_h03.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_000699

ORF Size: 1533 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_000699.3](#)

RefSeq Size: 1660 bp

RefSeq ORF: 1536 bp

Locus ID: 279

UniProt ID: [P04746](#)

Cytogenetics: 1p21.1

Domains: alpha-amylase, Aamy_C, Aamy

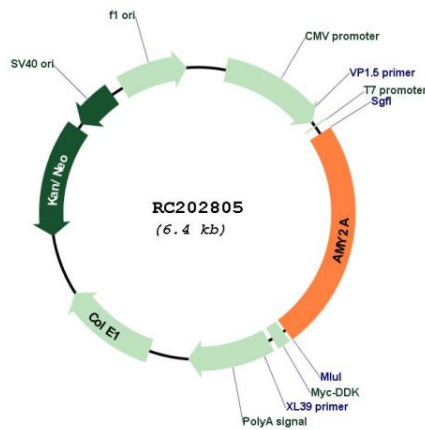
Protein Families: Secreted Protein

Protein Pathways: Metabolic pathways, Starch and sucrose metabolism

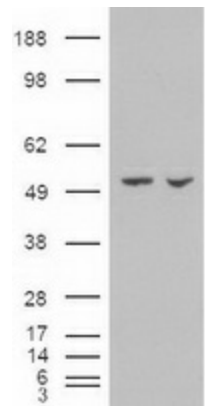
MW: 57.7 kDa

Gene Summary: This gene encodes a member of the alpha-amylase family of proteins. Amylases are secreted proteins that hydrolyze 1,4-alpha-glucoside bonds in oligosaccharides and polysaccharides, catalyzing the first step in digestion of dietary starch and glycogen. This gene and several family members are present in a gene cluster on chromosome 1. This gene encodes an amylase isoenzyme produced by the pancreas. [provided by RefSeq, Jan 2015]

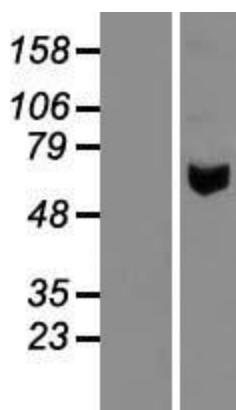
Product images:



Circular map for RC202805



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY AMY2A (Cat# RC202805, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-AMY2A (Cat# [TA500146]). Positive lysates [LY424559] (100ug) and [LC424559] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424559]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202805 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).