


Proteomics Exercise

1. Go to the [UniProt YouTube Tutorial](#). [no image]
2. Watch the videos [UniProtKB Intro Tutorial](#) and the [UniProtKB Entry View Intro \(inc Feature Viewer\) Tutorial](#). [no image]
3. Now go to the [GeneRefSeq Gene Report](#) help pages and review key features on search summary page results. [no image]

4. Now let's do a quick compare and contrast between the information on these two sites. Search for the Human APP gene (Amyloid beta A4 protein) from both the [UniProtKB](#) and [RefSeq gene](#) home pages. You should get a result that looks like this, though it might take a couple clicks.



[BLAST](#)
[Align](#)
[Retrieve/ID mapping](#)
[Peptide search](#)

[Help](#)
[Contact](#)

UniProtKB - P05067 (A4_HUMAN)

[Display](#)

[BLAST](#)
[Align](#)
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[Feedback](#)
[Help video](#)
[Other tutorials and videos](#)

Entry

Publications

Feature viewer

Feature table

None

Function

Names & Taxonomy

Subcellular location

Pathology & Biotech

PTM / Processing

Expression

Interaction

Structure

Family & Domains

Sequences (11)

Cross-references

Entry information

Miscellaneous

Similar proteins

▲ Top

NCBI

Resources

How To

Gene

Full Report

Send to

Summary

Official Symbol

APP

provided by HGNC

Official Full Name

amyloid beta precursor protein

provided by HGNC

Primary source

HGNC:HGNC:620

See related

Ensembl:ENSG00000142192 MM:104760 Vega:OTTHUMG00000078438

Gene type

protein coding

RefSeq status

REVIEWED

Organism

Homo sapiens

Lineage

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Haplorhina; Catarrhini; Hominoidea; Homo

Also known as

Summary

This gene encodes a cell surface receptor and transmembrane precursor protein that is cleaved by secretases to form a number of peptides. Some of these peptides are secreted and can bind to the acetyltransferase complex APB1/TP60 to promote transcriptional activation, while others form the protein basis of the amyloid plaques found in the brains of patients with Alzheimer disease. In addition, two of the peptides are antimicrobial peptides, having been shown to have bactericidal and antifungal activities. Mutations in this gene have been implicated in autosomal dominant Alzheimer disease and cerebrovascular amyloidosis (cerebral amyloid angiopathy). Multiple transcript variants encoding several different isoforms have been found for this gene. (provided by RefSeq, Aug 2014)

Orthologs

mouse

all

Genomic context

Location:

21q21.3

See APP in Genome Data Viewer Map Viewer

Exon count:

20

Annotation release	Status	Assembly	Chr	Location
108	current	GRO-C38.p7 (GCF_000001405.33)	21	NC_000021.9 (25880550..2617128, complement)
105	previous assembly	GRO-C37.p3 (GCF_000001405.28)	21	NC_000021.8 (27252861..2754346, complement)

Chromosome 21 - NC_000021.9

LOC155153

LOC155152757

APP

RBMS3P1

ENSR00000142192

ENSR00000142193

Table of contents

Summary

Genomic context

Genomic regions, transcripts, and products

Bibliography

Phenotypes

Variation

HMV-1 interactions

Pathways from BioSystems

Interactions

General gene information

Markers, Homology, Gene Ontology

General protein information

NCBI Reference Sequences (RefSeq)

Related sequences

Additional links

Local-specific Databases

Genome Browsers

Genome Data Viewer

Map Viewer

Variation Viewer (GRCh37.p13)

Variation Viewer (GRCh38)

1000 Genomes Browser (GRCh37.p13)

Ensembl

UCSC

5. Examine the information and presentation provided by each resource including the RefSeq gene viewer and UniProt feature viewer with the questions below in mind.