Q1

RBP4

retinol binding protein 4

Acession number: KAI6070658.1 (Can’t find a reference ID from NIBH, This is from genbank)

Species: Homo Sapiens

Function: The protein belongs to lipocalin family and is the specific carrier for retinol (vitamin A alcohol) in the blood. It will bind to retinol, and deliver retinol from liver to the surrounding tissues.

Q2:

Method: TBLASTN against Chimpanzee EST

Database: Expressed sequence tags

Organism: chimpanzee (taxid:9598)

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Chosen match: CB295970.1, A 689 base pair clone from chimpanzee brain library Pan trogglodytes. See below for more detailsGraphical user interface, text, application, email

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Description automatically generated

Q3

Chosen sequence:

Using EMBOSS Transeq and identify the reading frame with same AA sequence on the alignment page, we result in the following AA sequence.

> chimpanzee protein

ASQIG\*FCIWKLPSS\*KKRSLLQPPSPKMVMLLLLFSALAGLFGAAEGQAFHLGKCPKPP

VQENFDVNKYLGRWYEIEKIPTTFENGRCIQANYSLMENGKIKVLNQELRADGTVNQIEG

EATPVNLTEPAKLEVKFSWFMPSAPYWILATDYENYALVYSCTSIIQLFHVDFAWILARN

PNLPPETVDSLKNILTSNNIDVKKMTVTDXVNCPKLS\*PGXTGRLHPLX

# Protein name: APOD isoform 3

ORGANISM [Pan troglodytes](https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=9598)

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini;

Catarrhini; Hominidae; Pan.

A BLASTP search against NR database (see setup in first screen-shot below) yielded a top hit result is to a protein from Pan Troglodytes

Top result is to a protein from Pan Troglodytes.

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