


## Raziskovanje ACE2

Odgovori:

1. Uniprot ID: Q9BYF1, dolžina proteina 805 bp, tkiva: pljuča, srce, ledvica, črevesje, biološka funkcija: encim, ki uravnava krvni tlak in služi kot receptor za vstop virusa SARS-COV-2 v celice (uniprot).

### Q9BYF1 · ACE2\_HUMAN

Protein <sup>i</sup>	Angiotensin-converting enzyme 2
Gene <sup>i</sup>	ACE2
Status <sup>i</sup>	 UniProtKB reviewed (Swiss-Prot)
Organism <sup>i</sup>	Homo sapiens (Human)

2. Molska masa: 92463.04 kDa, izoelektrična točka (pI): 5.36, GRAVY indeks: -0,274 (neg. vrednost pomeni, da je protein hidrofilen, protparam).

#### ACE2\_HUMAN (Q9BYF1)

##### Description:

Angiotensin-converting enzyme 2 precursor (EC 3.4.17.23) (Angiotensin-converting enzyme homolog) (ACEH) (Angiotensin-converting enzyme-related carboxypeptidase) (EC 3.4.17.-) (ACE-related carboxypeptidase) (Metalloprotease MPROT15) [Contains: Processed angiotensin-converting enzyme 2]

##### Organism:

Homo sapiens (Human)

The computation has been carried out on the complete sequence (805 amino acids).

**Warning:** All computation results shown below do **not** take into account any annotated post-translational modification.

[\[Documentation / Reference\]](#)

**Number of amino acids:** 805

**Molecular weight:** 92463.04

**Theoretical pI:** 5.36

3. Domene: peptidaza M2, Collectrin-like, sodi v družino metalopeptidaz M2 (uniprot, interpro).

4. Mišji homolog, Uniprot ID: Q8R010; homologa ACE2 pri človeku: Uniprot ID: P1282 (Angiotenzin), Uniprot ID: Q9HBJ8 (Collectrin) → Blast

Descriptions

Graphic Summary

Alignments

Taxonomy

Sequences producing significant alignments

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Select columns

Show 100

select all

3 sequences selected

GenPept

Graphics

Distance tree of results

Multiple alignment

MSA Viewer

Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession
<input checked="" type="checkbox"/> <div> <div>RecName: Full=Angiotensin-converting enzyme 2; AltName: Full=Angiotensin-converting enzyme homolog; Short=ACE...</div> <div>Homo sapiens</div> </div>	Homo sapiens	1685	1685	100%	0.0	100.00%	805	Q9BYF1.2
<input checked="" type="checkbox"/> <div> <div>RecName: Full=Angiotensin-converting enzyme; Short=ACE; AltName: Full=Dipeptidyl carboxypeptidase I; AltName: Full...</div> <div>Homo sapiens</div> </div>	Homo sapiens	509	1007	74%	6e-164	41.79%	1306	P12821.1
<input checked="" type="checkbox"/> <div> <div>RecName: Full=Collectrin; AltName: Full=Transmembrane protein 27; Flags: Precursor (Homo sapiens)</div> <div>Homo sapiens</div> </div>	Homo sapiens	135	135	24%	6e-36	40.87%	222	Q9HBJ8.1

5. Članek: SARS-CoV-2 pandemic and research gaps: Understanding SARS-CoV-2 interaction with the ACE2 receptor and implications for therapy (DOI: 10.7150/thno.48076).

[Review](#) > [Theranostics](#). 2020 Jun 12;10(16):7448-7464. doi: 10.7150/thno.48076.

eCollection 2020.

## SARS-CoV-2 pandemic and research gaps: Understanding SARS-CoV-2 interaction with the ACE2 receptor and implications for therapy

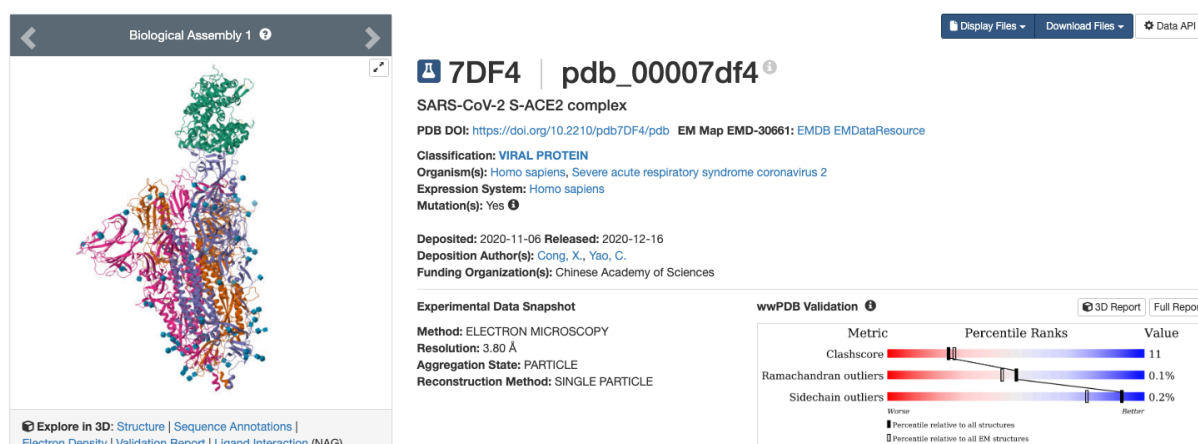
Prasun K Datta <sup>1 2</sup>, Fengming Liu <sup>1 2</sup>, Tracy Fischer <sup>1 2</sup>, Jay Rappaport <sup>1 2</sup>, Xuebin Qin <sup>1 2</sup>

Affiliations + expand

PMID: 32642005 PMCID: [PMC7330865](#) DOI: [10.7150/thno.48076](#)

6. Verige v kompleksu:

- veriga A: ACE2,
- veriga E: Spike protein SARS-CoV-2.



7. AK mesta: K31, E35, D38, Y41, Q42, Y83, K353, D355, R357.

Mutacije zmanjšajo afiniteto vezave med ACE2 in spike proteinom, kar vpliva na učinkovitost vstopa virusa v celice.