Id: NG\_012575.2

Descrição: Homo sapiens angiotensin I converting enzyme 2 (ACE2), RefSeqGene on chromosome X

Name: NG\_012575

Len(seq): 39928

Anotações:

Taxonomy: ['Eukaryota', 'Metazoa', 'Chordata', 'Craniata', 'Vertebrata', 'Euteleostomi', 'Mammalia', 'Eutheria', 'Euarchontoglires', 'Primates', 'Haplorrhini', 'Catarrhini', 'Hominidae', 'Homo']

References: [Reference(title='Interferons and viruses induce a novel truncated ACE2 isoform and not the full-length SARS-CoV-2 receptor', ...), Reference(title='Tissue-specific and interferon-inducible expression of nonfunctional ACE2 through endogenous retroelement co-option', ...)]

This sequence is a reference standard in the RefSeqGene project.On Aug 14, 2020 this sequence version replaced NG\_012575.1. Summary: The protein encoded by this gene belongs to the angiotensin-converting enzyme family of dipeptidyl carboxydipeptidases and has considerable homology to human angiotensin 1 converting enzyme. This secreted protein catalyzes the cleavage of angiotensin I into angiotensin 1-9, and angiotensin II into the vasodilator angiotensin 1-7. ACE2 is known to be expressed in various human organs, and its organ- and cell-specific expression suggests that it may play a role in the regulation of cardiovascular and renal function, as well as fertility. In addition, the encoded protein is a functional receptor for the spike glycoprotein of the human coronavirus HCoV-NL63 and the human severe acute respiratory syndrome coronaviruses, SARS-CoV and SARS-CoV-2, the latter is the causative agent of coronavirus disease-2019 (COVID-19). Multiple splice variants have been found for this gene and the dACE2 (or MIRb-ACE2) splice variant has been found to be interferon inducible. [provided by RefSeq, Nov 2020].

Qualifiers:

chromosome, Value: ['X']

['GeneID:59272', 'HGNC:HGNC:13557', 'MIM:300335']

gene\_synonym, Value: ['ACEH']

transcript\_id, Value: ['NM\_001371415.1']

Value: ['isoform 1 precursor is encoded by transcript variant 1; angiotensin I converting enzyme (peptidyl-dipeptidase A) 2; ACE-related carboxypeptidase; metalloprotease MPROT15; angiotensin-converting enzyme homolog; angiotensin-converting enzyme-related carboxypeptidase; truncated angiotensin converting enzyme 2']

translation, Value: ['MSSSSWLLLSLVAVTAAQSTIEEQAKTFLDKFNHEAEDLFYQSSLASWNYNTNITEENVQNMNNAGDKWSAFLKEQSTLAQMYPLQEIQNLTVKLQLQALQQNGSSVLSEDKSKRLNTILNTMSTIYSTGKVCNPDNPQECLLLEPGLNEIMANSLDYNERLWAWESWRSEVGKQLRPLYEEYVVLKNEMARANHYEDYGDYWRGDYEVNGVDGYDYSRGQLIEDVEHTFEEIKPLYEHLHAYVRAKLMNAYPSYISPIGCLPAHLLGDMWGRFWTNLYSLTVPFGQKPNIDVTDAMVDQAWDAQRIFKEAEKFFVSVGLPNMTQGFWENSMLTDPGNVQKAVCHPTAWDLGKGDFRILMCTKVTMDDFLTAHHEMGHIQYDMAYAAQPFLLRNGANEGFHEAVGEIMSLSAATPKHLKSIGLLSPDFQEDNETEINFLLKQALTIVGTLPFTYMLEKWRWMVFKGEIPKDQWMKKWWEMKREIVGVVEPVPHDETYCDPASLFHVSNDYSFIRYYTRTLYQFQFQEALCQAAKHEGPLHKCDISNSTEAGQKLFNMLRLGKSEPWTLALENVVGAKNMNVRPLLNYFEPLFTWLKDQNKNSFVGWSTDWSPYADQSIKVRISLKSALGDKAYEWNDNEMYLFRSSVAYAMRQYFLKVKNQMILFGEEDVRVANLKPRISFNFFVTAPKNVSDIIPRTEVEKAIRMSRSRINDAFRLNDNSLEFLGIQPTLGPPNQPPVSIWLIVFGVVMGVIVVGIVILIFTGIRDRKKKNKARSGENPYASIDISKGENNPGFQNTDDVQTSF']

Key: note, Value: ['propagated from UniProtKB/Swiss-Prot (Q9BYF1.2)']

Key: product, Value: ['Angiotensin-converting enzyme 2. /id=PRO\_0000028570'

https://www.uniprot.org/uniprot/Q9BYF1

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Key: note, Value: ['propagated from UniProtKB/Swiss-Prot (Q9BYF1.2)']

Key: product, Value: ['Processed angiotensin-converting enzyme 2. /id=PRO\_0000292268']

https://www.genscript.com/protein-database/ace2\_human

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Key: note, Value: ['propagated from UniProtKB/Swiss-Prot (Q9BYF1.2); Region: Interaction with SARS-CoV spike glycoprotein. /evidence=ECO:0000269|PubMed:15791205']

https://www.unboundmedicine.com/medline/citation/15791205/Receptor\_and\_viral\_determinants\_of\_SARS\_coronavirus\_adaptation\_to\_human\_ACE2\_

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Key: note, Value: ['N-linked (GlcNAc...) asparagine. /evidence=ECO:0000305|PubMed:14754895; propagated from UniProtKB/Swiss-Prot (Q9BYF1.2); glycosylation site']

https://pubmed.ncbi.nlm.nih.gov/14754895/

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Key: note, Value: ['N-linked (GlcNAc...) asparagine. /evidence=ECO:0000269|PubMed:14754895, ECO:0000269|PubMed:15084671; propagated from UniProtKB/Swiss-Prot (Q9BYF1.2); glycosylation site']

https://pubmed.ncbi.nlm.nih.gov/15084671/

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Key: note, Value: ['N-linked (GlcNAc...) asparagine. /evidence=ECO:0000269|PubMed:14754895, ECO:0000269|PubMed:19159218; propagated from UniProtKB/Swiss-Prot (Q9BYF1.2); glycosylation site']

https://pubmed.ncbi.nlm.nih.gov/19159218/

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Key: note, Value: ['propagated from UniProtKB/Swiss-Prot (Q9BYF1.2); Region: Essential for cleavage by ADAM17. /evidence=ECO:0000269|PubMed:24227843']

https://pubmed.ncbi.nlm.nih.gov/24227843/

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