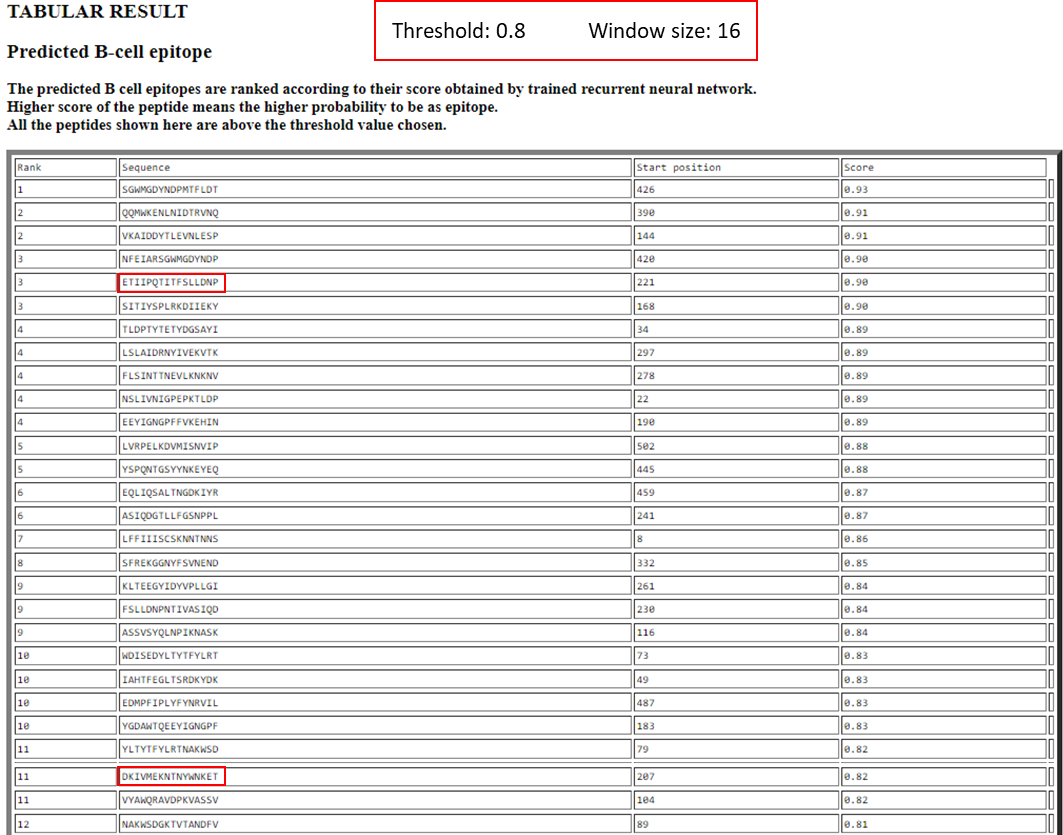
**Supplementary dataset 20**

Raw data ABCPred confirmation of epitopic regions of proteins from **OppA family**. The parameters were chosen considering that this is a comparison with selected epitopes from protein >fig|6666666.171271.peg.2613 to construct a chimera protein.

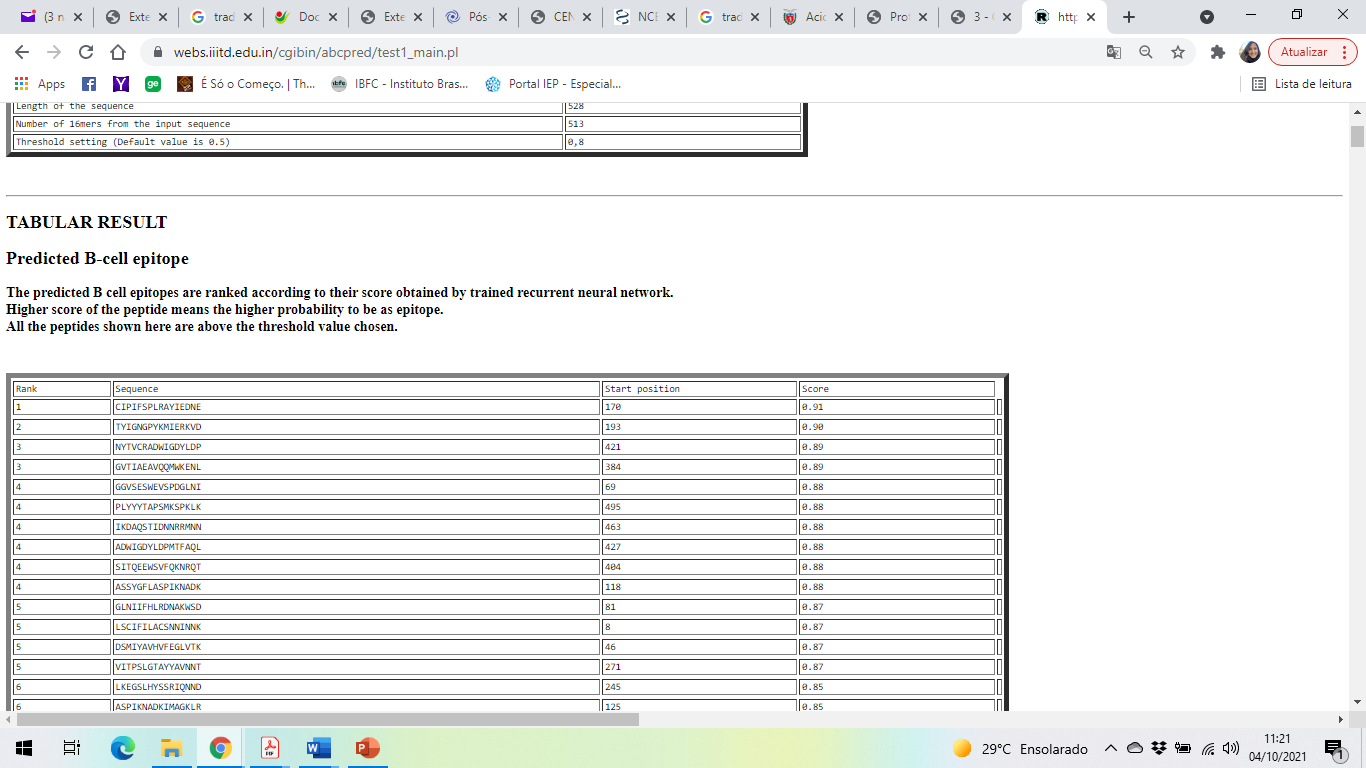
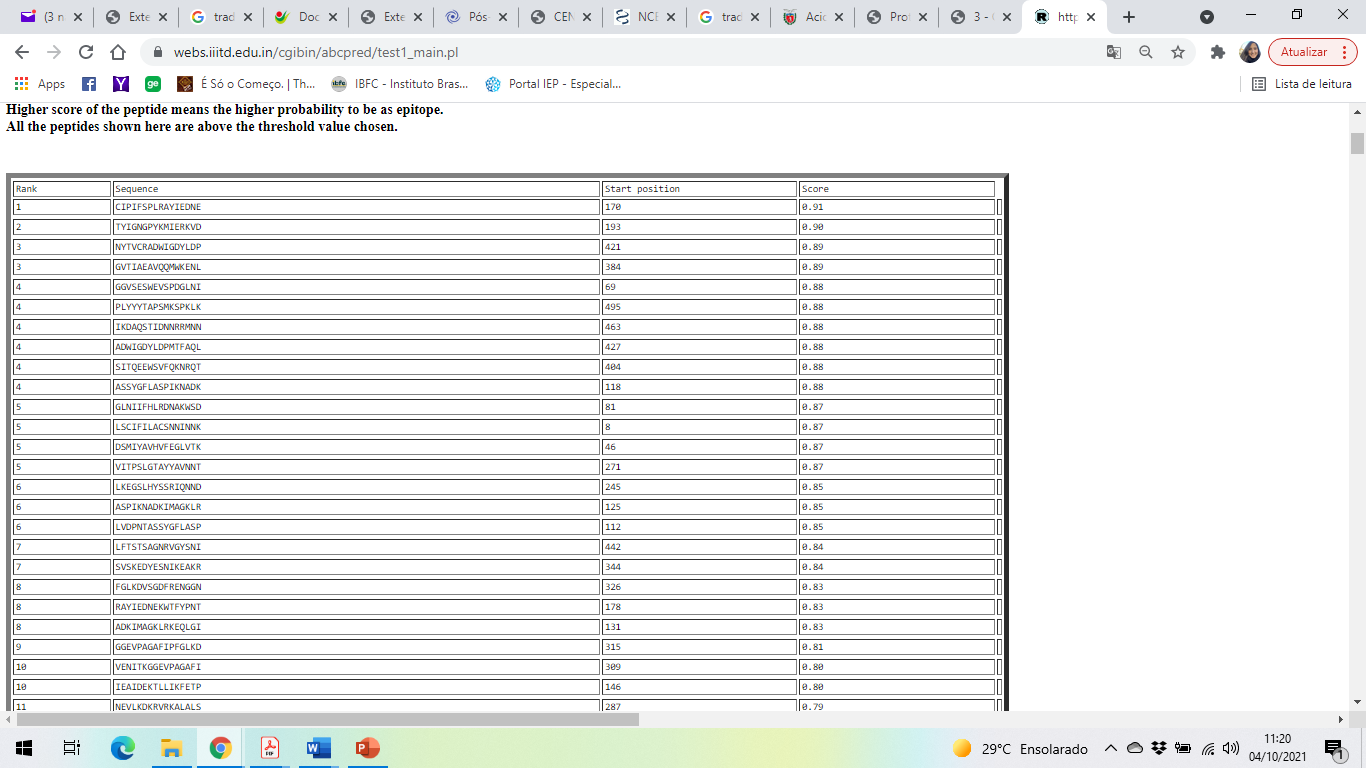
**>fig|6666666.171271.peg.189**

MKKYILILFFIIISCSKNNTNNSLIVNIGPEPKTLDPTYTETYDGSAYIAHTFEGLTSRDKYDKLIPAVAESWDISEDYLTYTFYLRTNAKWSDGKTVTANDFVYAWQRAVDPKVASSVSYQLNPIKNASKIIKGELSLTELGVKAIDDYTLEVNLESPTAYFLDLLSITIYSPLRKDIIEKYGDAWTQEEYIGNGPFFVKEHINNDKIVMEKNTNYWNKETIIPQTITFSLLDNPNTIVASIQDGTLLFGSNPPLQDIPKLTEEGYIDYVPLLGIYFLSINTTNEVLKNKNVRKALSLAIDRNYIVEKVTKGNEIPAAALVPYSVFDIDGSFREKGGNYFSVNENDYQKNIEEARRLLAEAGYSNGSNFPVLEYSVESQSSLNIFEAIQQMWKENLNIDTRVNQLEWGVFMQTTRGDKNFEIARSGWMGDYNDPMTFLDTFLSYSPQNTGSYYNKEYEQLIQSALTNGDKIYRMQTLHKAEDVLMEDMPFIPLYFYNRVILVRPELKDVMISNVIPPRFFYAYVEK



**>fig|6666666.171271.peg.487**

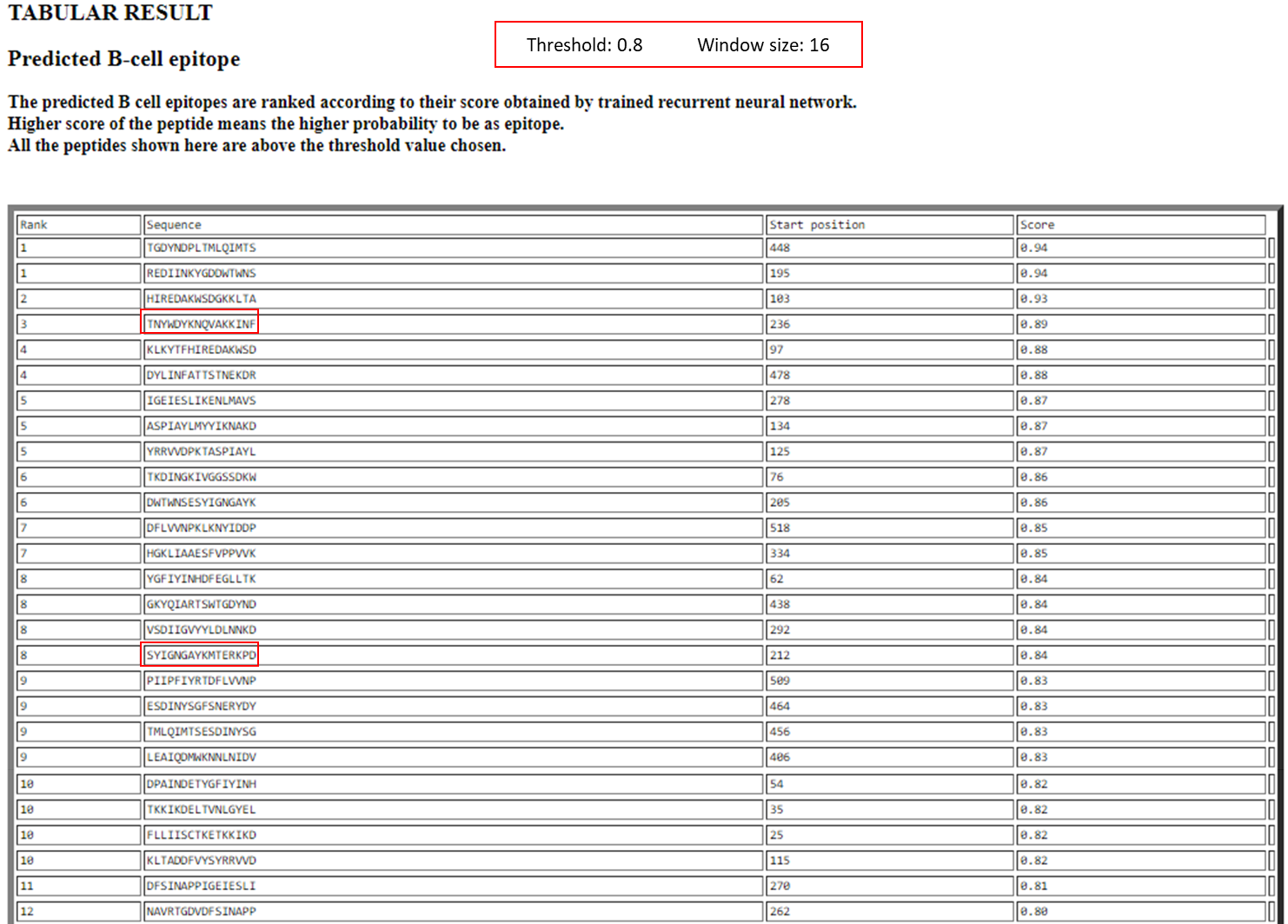
MKKLFAILSCIFILACSNNINNKEVIKVTVGAEPQSIDPSYLSAIDSMIYAVHVFEGLVTKDKEGNIVGGVSESWEVSPDGLNIIFHLRDNAKWSDGKKITADEFVYSFRRLVDPNTASSYGFLASPIKNADKIMAGKLRKEQLGIEAIDEKTLLIKFETPTAYFLELFCIPIFSPLRAYIEDNEKWTFYPNTYIGNGPYKMIERKVDESISLELNTNYWNKDNMVANRIDFIMLSDVSTAYPALKEGSLHYSSRIQNNDIELLRKEGYLVITPSLGTAYYAVNNTNEVLKDKRVRKALALSIDRNYIVENITKGGEVPAGAFIPFGLKDVSGDFRENGGNYFSVSKEDYESNIKEAKRLLAEAGYSNGVNFPVLEFKTNPGAGVTIAEAVQQMWKENLNVDMSITQEEWSVFQKNRQTRNYTVCRADWIGDYLDPMTFAQLFTSTSAGNRVGYSNINYDSLIKDAQSTIDNNRRMNNMHIAEDMLIGDDMALIPLYYYTAPSMKSPKLKDVVVDTLEIRRFFYSYLQ



Threshold: 0.8 Window size: 16

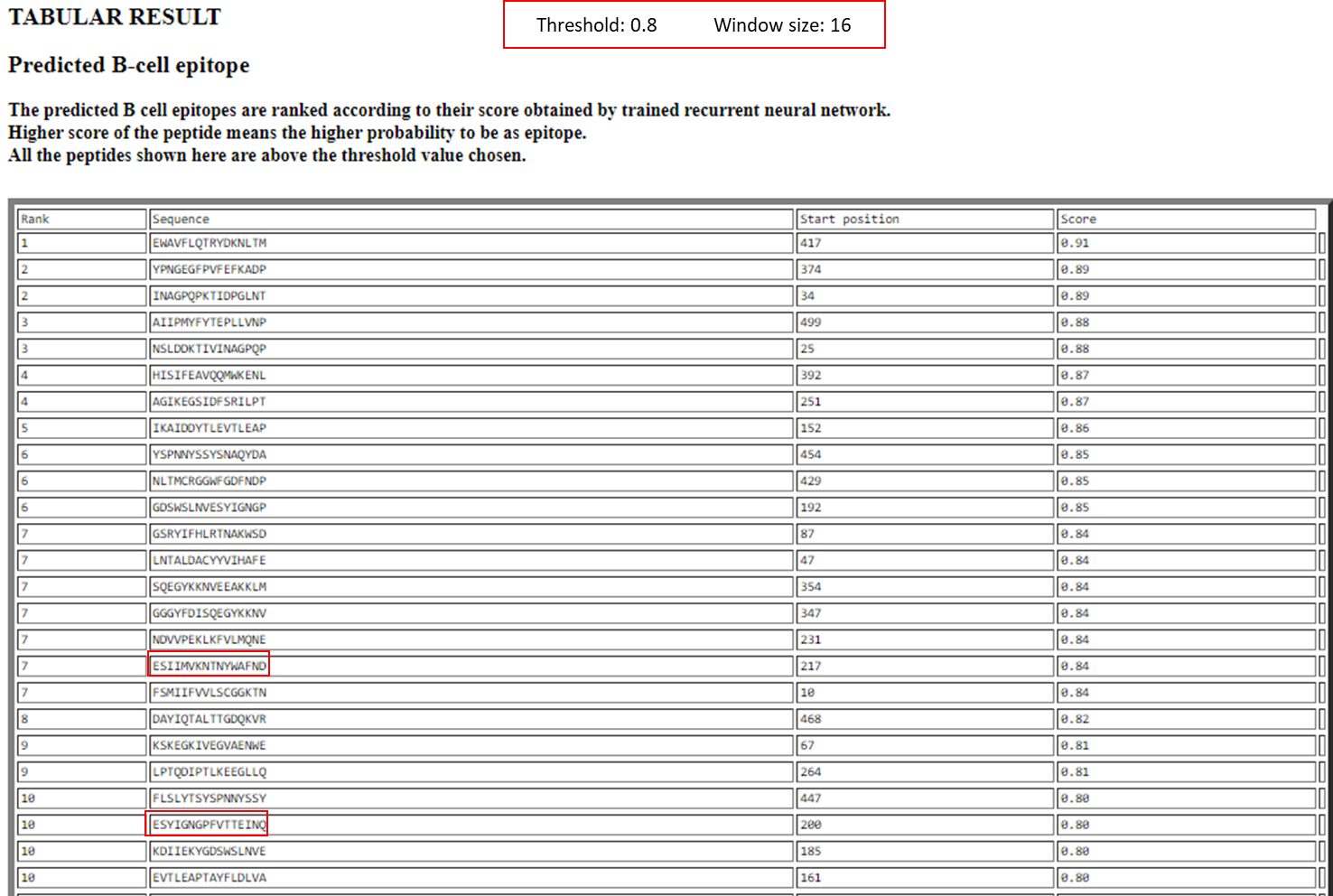
**>fig|6666666.171271.peg.763**

MTYNLKTKNFFIKTLFQTFFIFLIFLLIISCTKETKKIKDELTVNLGYELQSIDPAINDETYGFIYINHDFEGLLTKDINGKIVGGSSDKWEISEDKLKYTFHIREDAKWSDGKKLTADDFVYSYRRVVDPKTASPIAYLMYYIKNAKDINIGKKQIDTLGVTAIDKNTLTIELENPTLYFEDILASGGCYVPVREDIINKYGDDWTWNSESYIGNGAYKMTERKPDELIAFELNTNYWDYKNQVAKKINFVLIADEYISLNAVRTGDVDFSINAPPIGEIESLIKENLMAVSDIIGVYYLDLNNKDKTLSDKRVRKALSLAIDRNYIVSNIGHGKLIAAESFVPPVVKGLEKSFREESSNFIIANNYSNNIIEAKKLLAEAGYPNGENFPILEVKVSSGFYTTVLEAIQDMWKNNLNIDVVVRTEESKITLPFRQSGKYQIARTSWTGDYNDPLTMLQIMTSESDINYSGFSNERYDYLINFATTSTNEKDRMEALKEAEAILFEEMPIIPFIYRTDFLVVNPKLKNYIDDPLGRYRFNYAYIEE



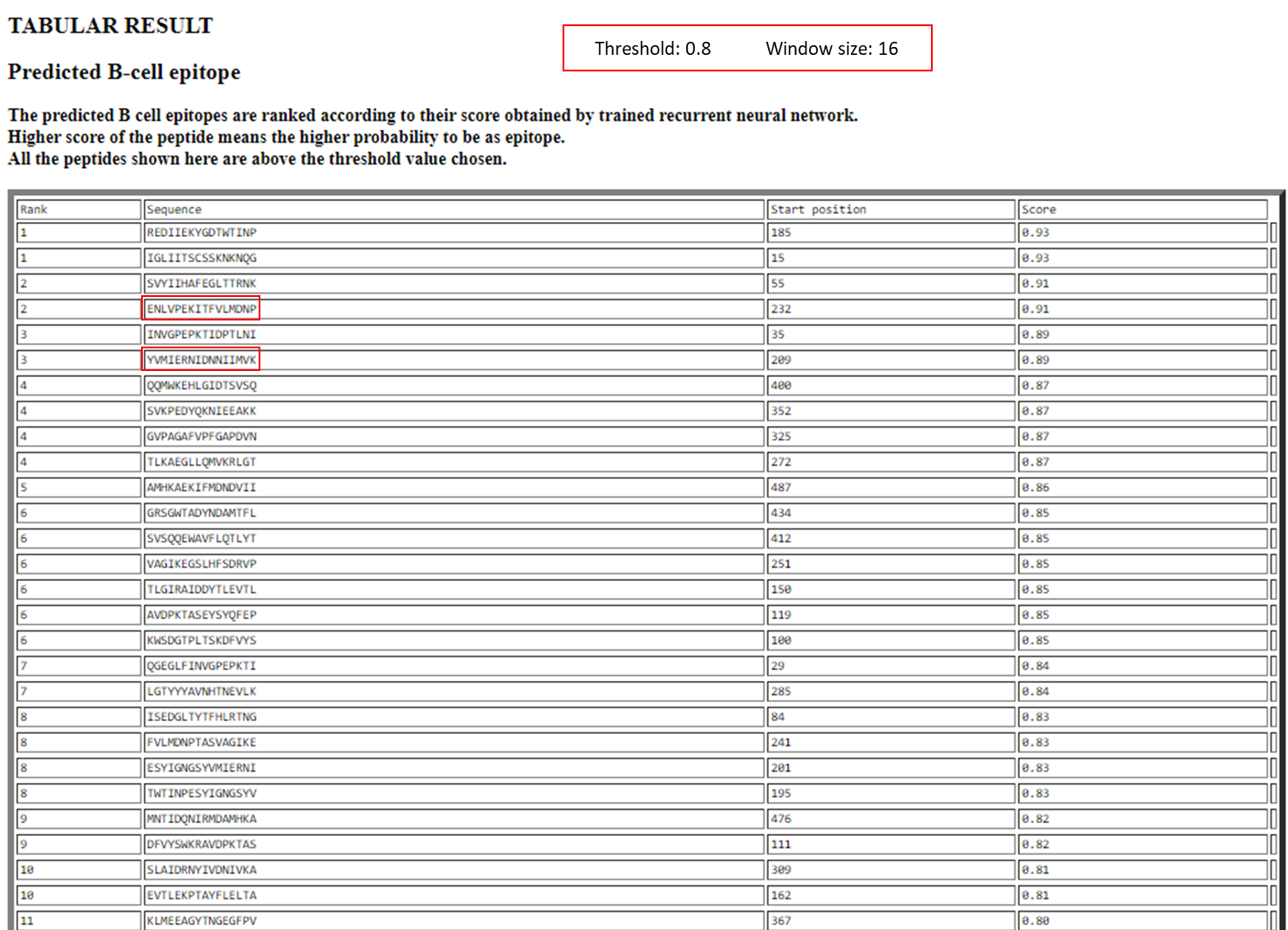
**>fig|6666666.171271.peg.892**

MYKRFLILFFSMIIFVVLSCGGKTNSLDDKTIVINAGPQPKTIDPGLNTALDACYYVIHAFEGLTTKSKEGKIVEGVAENWEILDDGSRYIFHLRTNAKWSDGKAVVADDFVYAWRRVVDPAVGSQYSFQHEPVKNAKAITAGEMPVDSLGIKAIDDYTLEVTLEAPTAYFLDLVAFTTFYPVRKDIIEKYGDSWSLNVESYIGNGPFVTTEINQDESIIMVKNTNYWAFNDVVPEKLKFVLMQNETASVAGIKEGSIDFSRILPTQDIPTLKEEGLLQIKPMLASYFYCLNTTNEVLKDIRVRKALALAIDRNYIVEQVTKGGETPANAFVPYGINDAEGSFRENGGGYFDISQEGYKKNVEEAKKLMAEAGYPNGEGFPVFEFKADPGFHISIFEAVQQMWKENLGIDTKIVQEEWAVFLQTRYDKNLTMCRGGWFGDFNDPINFLSLYTSYSPNNYSSYSNAQYDAYIQTALTTGDQKVRMEAMHKAEELLVNSFAIIPMYFYTEPLLVNPKLKDVYYDALSMHKFTYASKEQ



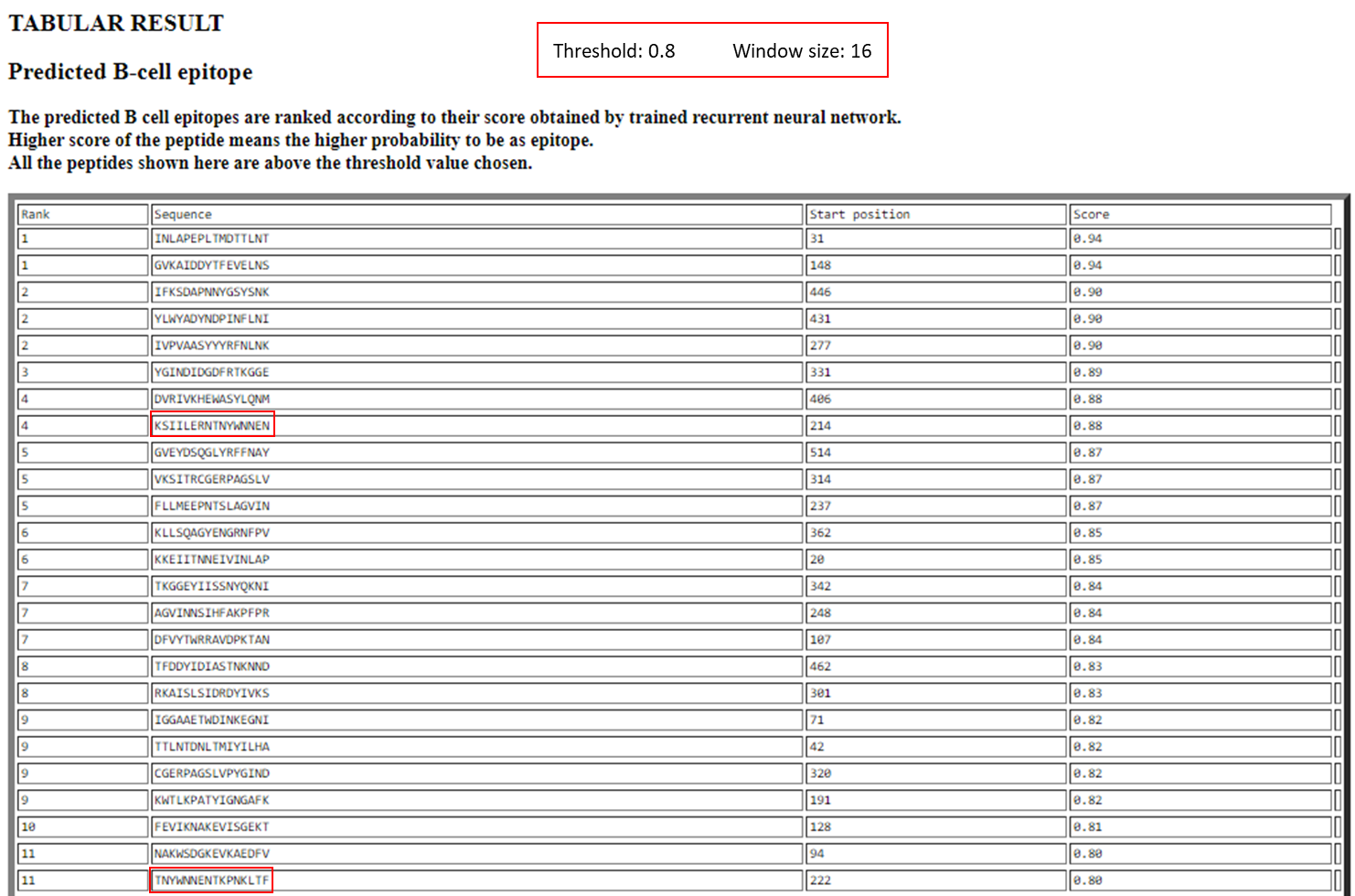
**>fig|6666666.171271.peg.894**

MKNIMRLFFIFLLSIGLIITSCSSKNKNQGEGLFINVGPEPKTIDPTLNIASDASVYIIHAFEGLTTRNKEGVLVGGAAESWDISEDGLTYTFHLRTNGKWSDGTPLTSKDFVYSWKRAVDPKTASEYSYQFEPVKNAMAINASKMELDTLGIRAIDDYTLEVTLEKPTAYFLELTAFPTFYPIREDIIEKYGDTWTINPESYIGNGSYVMIERNIDNNIIMVKNTNYWDYENLVPEKITFVLMDNPTASVAGIKEGSLHFSDRVPAQDIDTLKAEGLLQMVKRLGTYYYAVNHTNEVLKDGRVRKALSLAIDRNYIVDNIVKAGVPAGAFVPFGAPDVNGDFREVGGDYISVKPEDYQKNIEEAKKLMEEAGYTNGEGFPVLQFLVDSNREIPTFEAVQQMWKEHLGIDTSVSQQEWAVFLQTLYTDKNYVMGRSGWTADYNDAMTFLGMFLSYSPQNHALFTNKEYDNLLQIAMNTIDQNIRMDAMHKAEKIFMDNDVIIPLYYYATPTLVSPKLKGVVYDNLAKHKFSYAYIEN



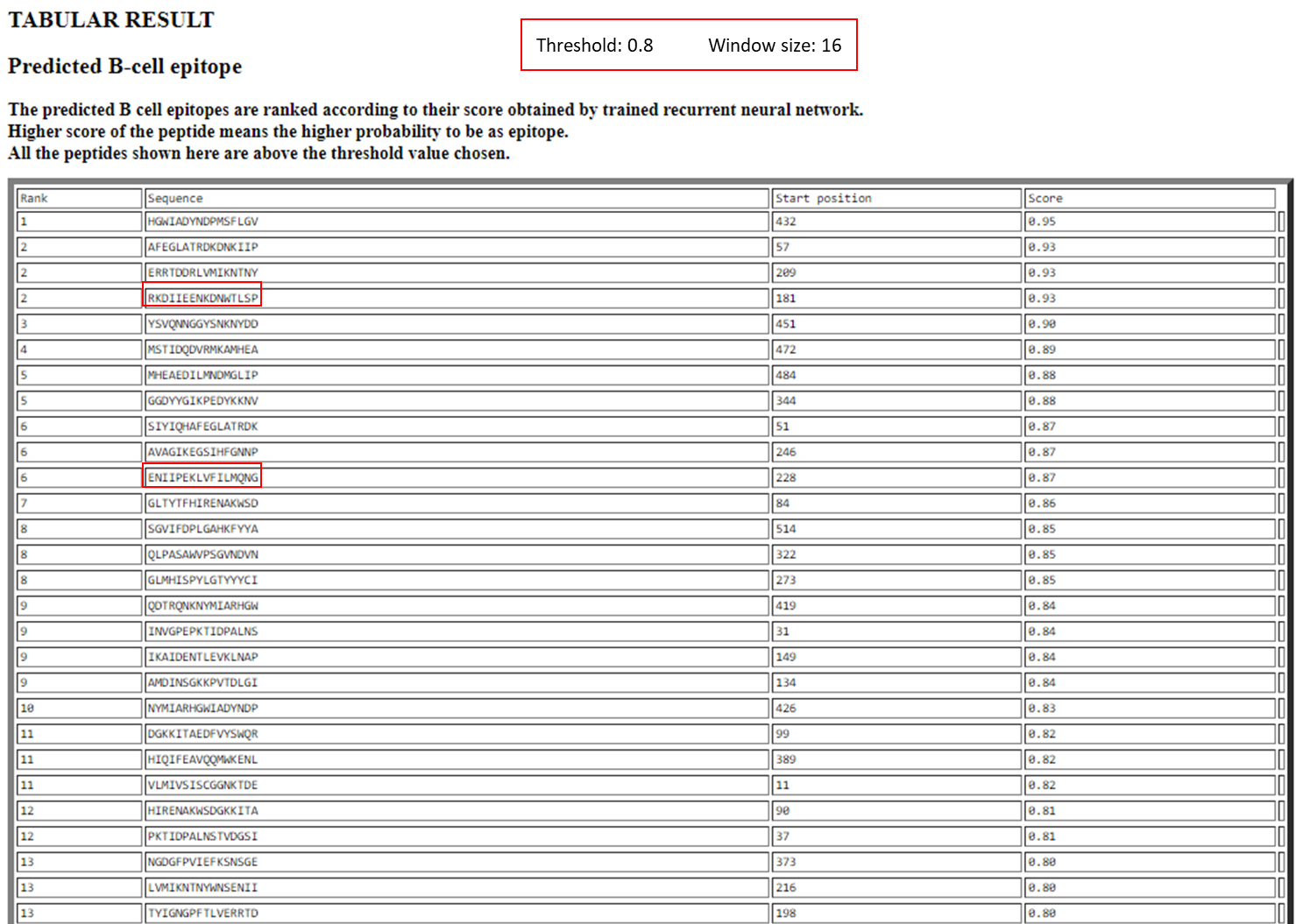
**>fig|6666666.171271.peg.2182**

MFKKIITAILLILLIISCSKKEIITNNEIVINLAPEPLTMDTTLNTDNLTMIYILHAFEGLTKKDANNKIIGGAAETWDINKEGNIYTFHLRTNAKWSDGKEVKAEDFVYTWRRAVDPKTANKYSYYFEVIKNAKEVISGEKTVEELGVKAIDDYTFEVELNSPTAYFLELAAYPPFYPVREDIINEYGDKWTLKPATYIGNGAFKMTERNFDKSIILERNTNYWNNENTKPNKLTFLLMEEPNTSLAGVINNSIHFAKPFPRNDIESLKQKGIVHIVPVAASYYYRFNLNKEVLKDEKVRKAISLSIDRDYIVKSITRCGERPAGSLVPYGINDIDGDFRTKGGEYIISSNYQKNIEEAKKLLSQAGYENGRNFPVIDLLIATREFDINIADAVQSMLKENLNIDVRIVKHEWASYLQNMYDRNFDLAVYLWYADYNDPINFLNIFKSDAPNNYGSYSNKTFDDYIDIASTNKNNDIRMPALHSAENIFMNDNAIIPIYFYSEALLVSPKLKGVEYDSQGLYRFFNAYLE



**>fig|6666666.171271.peg.2198**

MKHLTLLLLSVLMIVSISCGGNKTDEGAIYINVGPEPKTIDPALNSTVDGSIYIQHAFEGLATRDKDNKIIPGVAESWDISEDGLTYTFHIRENAKWSDGKKITAEDFVYSWQRAVDPITASEYAYQFEPVLNAMDINSGKKPVTDLGIKAIDENTLEVKLNAPTAYFLELAAFPTFYPVRKDIIEENKDNWTLSPDTYIGNGPFTLVERRTDDRLVMIKNTNYWNSENIIPEKLVFILMQNGTAAVAGIKEGSIHFGNNPPLQDIETLQSEGLMHISPYLGTYYYCINITNSVLKDVRIRKALTLAIDRNYLVEQVTRGGQLPASAWVPSGVNDVNGDFREVGGDYYGIKPEDYKKNVEEAKRLLAEAGYPNGDGFPVIEFKSNSGEHIQIFEAVQQMWKENLNIDSTIAQEEWATFQDTRQNKNYMIARHGWIADYNDPMSFLGVFLSYSVQNNGGYSNKNYDDKLKLAMSTIDQDVRMKAMHEAEDILMNDMGLIPLYFYTDPIMISKKLSGVIFDPLGAHKFYYAKLAK



**>fig|6666666.171271.peg.2276**

MKKIILIVSFIFIYTISCAKQNSIVNEAISINMGPEPKTLDPTLNSLGSASCYILHAFEGLTKMDSNNTVQPGIAERWDISDDGLTYTFHLRTNALWSDGTNVKAKDFEYSWKRSVNPSVAAEYAYMMEIVQNAKEINEGTMDYNELAVKAIDDYTFEVTLANPSPYFLEFIASTGIFMPLREDIINTYGDEWTLKPETYIVNGAYTMTERLADEKIVFSANKNYYNPNEQVAKKINFVLMSEPNTAMSGIKSSSIHFSALEPPSSEIASLKADNLLVENNAIGTYFIELNITNNALRDKRVRQALSLAIDRNYLVLNVTKGGQTPAGAFIPPTVKGSNSTFRVENQEYINNKTYLANVEKAKRLMAEAGYPNGKDFPVLELKVSPGIYVLLGETIQQMWRDNLNVYIKLLQEEFPVTLQTLVDKNYEMARMGWTGDYNDPMTMLEIMLSYSGINHTGFSNADFDNLINIAKTSADNDVRMNAMKEAEAILMDEMPIIPLYYRFVYGKPNTKKCCIKPFRKT

