

CSpritz - Accurate detection of protein disorder

Version 1.2

Title: PF3D7_0904300.fasta emailaddress: mubasher.mohammed@su.se pid: 1932353729

Status: finished

NB: The data will be kept for two weeks, after which it will be deleted without further notice.

Available files: (help)

Your input parameters: HTML
Fasta sequences (amino, secondary structure, disorder, confidence): TXT
Disorder plot: PDF
Graph of PDB homologue(s) found:: PDF
Disorder Prediction (with disorder probability): TXT
Protein statistics: TXT

Disordered residues and stats: (help)

1	10	20	30	40	50	60
						KCKEGFFNFSRD
						CCCCCECCCC
DDDDDDDDD	וסססססססססס	DDDDDDDDDDO	0000000000	000000000	0000000000	00000000000
71	80	90	100	110	120	130
						CVPCNSQEYCKS
						ССССССНСССС
00000000	0000000000	0000000000	0000000000	0000000000	00000000000	00000000000
141	150	160	170	180	190	200
						MIQCKICDENYR
						EEEEECCCCCCC
						00000000000
211	220	230	240	250	260	270
YNFLAPLQQ	PCVLCNMST	YFIIFFFAIF	IFVISIFIAM	CINNEKEKSI	IQLFFTYIQF	VSLLRYVNSNYD
HHCCCCCCC	СНИННИНН	нинининин	нининееее	ЕЕССИННИН	ннининнин	ннинннссссс
000000000	000000000	000000000	000000000	DDDDDDDDDD	D0000000000	DDDDDDDDDDD
281	290	300	310	320	330	340
						TLFYKNVKRRED
						EEEECCCCCCC
000000000	OOOODDDDDD	וסססססססססססס	וסססססססססססס	וסססססססססססס	DDD00000000	DOODDDDDDDDD
251	260	270	200	200	400	410
351	360	370	380	390	400	410 NFCDSNNLFINE
						CCCCCCCHHHC
						DDDDDDDDDDDDDD
	יטטטטטטטטטט	יטטטטטטטטטטט	יטטטטטטטטטטט		יססססססססססס	
421	430	440	450	460	470	480
		RCNLFSAENY				YDEHREESFIII
						CCCCCCEEEE
DDDDDDDDD	ומממממממממ	וססססססססססס	DD000000000	000000000	OOOODDDDDDDI	ODDDDDDDDDDD
491	500	510	520	530	540	550
						KIINKKDTLFLI
						ннеснинини
DDDDDDDDD	DDD0000000	0000000DD	000000DDDD	опропропро	0000DDDDDD1	DDDD0000D000
561	570	580	590	600	610	620
						DPHRFFFDIHTI
						СССССССССС
						DDDDDDDDDDD
631	640	650	660	670	680	690
EKGKKKKKN	VSNTRDCFD	NDEGNKMCHM	KLYSSCRIRN	NKSNICHSVE	KNNIKEYDKKI	EKEITNKRNNMW
HHCCCCCCC	cccccccc	ССССССНСС	cccccccc	cccccccc	ccccccccc	ССССССССНН
DDDDDDDDD	וסססססססססס	וססססססססססס	ומממממממממ	מסססססססססס	וססססססססססס	DDDDDDDDDDDD
701	710	720	730	740	750	760
						PIYFVFILFFLI
						нинининини
0000000D	וממממממטטטו	000000 סמטט	000000000	ספפפפפפטטס	OOOODDDDDDD	00000000000
771	780	790	800	810	820	920
						830 ENEQKKEQKLKS
						иннинниннинниннинниннинниннин Нининнинниннин
						DDDDDDDDDDD
841	850	860	870	880	890	900
LLLMSNVLN	YYTDDEESI	LNTKNNNVKK				YLYNIISLSNEP
						нниннсссссн
DDDDDDDDD	וסססססססססס	ומממממממממ	ומממממממממ	DDDDDDDDDD	DDDD0000000	00000DD00000

Total amino acids:	2487
Total % disorder:	68.63
Total no. of disordered regions > 30 amino acids:	14
Total no. of disordered regions > 50 amino acids:	10
Number of disordered segments:	50
Length distribution of segments (N to C terminal order):	27 11 11 38 109 30 2 13 10 1 26 85 14 7 6 122 2 9 12 21 31 173 1 164 41 75 28 3 8 108 10 68 3 4 16 91 24 3 6 10 5 6 22 26 30 13 16 110 41 15

911 920 930 940 950 960 970 QKCLSILIKLTLEKKYPLISLKTCIHVLRKNHFFETDNFLIILKNFLKFTKKFVKVLRRKKYEQSYEHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	ннн
981 990 1000 1010 1020 1030 1040 IVAWGMSILNYGNLRDINYNISHILFHVYSILNKCRFYKNIVEHFFNIYPYVNNNAMKGMMSLINMYN HHHCCCCECCCCCCHHHHHCCCCHHHHHHHHHHHHHHH	ccc
1051 1060 1070 1080 1090 1100 1110 CNFSFDKNNLYEEEKQSQKIKNNILIEQNFLDDNVNMDIKDDPCDEIEDMNMLQMYGNSFCQSFMPLX CCCCCCCCCCHHHHHHCCCCCCCCCCCCCCCCCCCCC	CCC
1121 1130 1140 1150 1160 1170 1180 NFNRKNDQSIHMEETYMCDRERFNCLDKYMCSNTYINKRNSETFVNAHKGEYKYDISSDMNLIDYKK CCCCCCCHHHHHHHCCCCCCCCCCCCCCCCCCCCCC	CCC
1191 1200 1210 1220 1230 1240 1250 RTKNFKGQRIFYHIHSLYIIELARIFIHCLLLDVSEFFFKIYHTHICEKYICNNLINLWGCYRNQNITCCCCCCCCEEEEEHHHHHHHHHHHHHHHHHHHHHHHHH	ннн
1261 1270 1280 1290 1300 1310 1320 RFFEYIKKGEYKNQQNIIRYNICSIINEKRDDNNNNIDNTDNIDNILSITDFINKKVLDIDFYNEYEI HHHHHHHHHHCCCCCCHHEEECCCCCCCCCCCCCCCC	HCC
1331 1340 1350 1360 1370 1380 1390 KNSKHYFINISEEKDYLNINELINFSKASDNIEELKRLQNNLIEKRNKKKLKIFSLIFCSAMPVHIII CCHHHHHHHHHHHCCCCCCCHHHHHHHCCCCCCCHHHHHH	ccc
1401 1410 1420 1430 1440 1450 1460 EMYLDEDDIKLIKERKRNFNILLENMSEQIMDQYVKENYNDKKYYFEMCNYGSSLNIRGEFLEAYSKI HHHCCHHHHHHHHCCHHHHHHHCHHHHHHHHHCCCCEEEEECCCCEEECCHHHHHH	CCE
1471 1480 1490 1500 1510 1520 1530 SEKNKNNIKELKTNIIDIKHIYNKGDDEDTDNLLNIKYIDILNKNKNDYMNYQYIKEYNSLLLIHNNY HHCCCCCCCCHCCCCCCCCCCCCCCCCCCCCCCCC	ccc
1541 1550 1560 1570 1580 1590 1600 CVGITGDLKGMNFYHSNASIIINPCIPLPTECTIELWLCCNPKKKYRNISGKKFAFCDKKGNSLFVLS CCEECCCCCCCEEEEEECCCCCCCCCCEEEEEEECCCCCC	ECC
1611 1620 1630 1640 1650 1660 1670 EDGLEDIEIYITNVELLSDYYKKMNYIQDIKTATHYHRLKDISKVLNYNNGIYIKSNMITKKCKKYKI CCCEEEEEEEECCCHHCCHHHHHHHHHHCCCCCCCCCC	ннн
1681 1690 1700 1710 1720 1730 1740 IYKIYKIGKNYNMRNNIIKKKKWNLINITKSSQGLVYYINGKYISFISHEILNMQKTFEICLFGNSCI HHHHHHHHHCHHHHHCHEECCCCCEEEEECCCCCCEEEEECCCCCC	ccc
1751 1760 1770 1780 1790 1800 1810 NNIGICSSFRIFNFLNKEEIKCRYKIIKNIKCKEMLGDMIKIQDDNNNNNNNYNYYNYNNFVIEGII CCCCECCCHHHHHHHCHHHHHHHHHHCCCCCCCCCCC	EEC
1821 1830 1840 1850 1860 1870 1880 ETKPAEIIFLINFIQSSKYTNRVIPFINDSNYMLKIYQLKFFDIYKNNINLSNMNYYEDICDKYNDF9 CCCCCHEEHHHHHCCCCCCCEEEEEEECCCCCEEEEEEEE	HCC
1891 1900 1910 1920 1930 1940 1950 TKKHIIHHNSNQNISCWQEEKSKNVDMVKKKNIYINYNNDDNIINNYSSIDCRIIHIKNKDHYGYNVY CCCEEEECCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	EEE
1961 1970 1980 1990 2000 2010 2020 KIIGRQDVPKIYGINIFSHNFGLACDLSKFYNLIISPSLSIYNELQKTLGYSICAWIFLPIEKSISYSEECCCCCCCEEEEEEEECCCCCEECCHHHHHHEEECCCCHHHHHH	нне
2031 2040 2050 2060 2070 2080 2090 IAGKKDIHVCIFSDDMLLGSIQNYTSKGNLLFYHSSGYSIKNMKRGWYYLNVIGTLQGQYYFLNGKFIECCCCCEEEEEEECCCCEEEEEEECCCCEEEEEECCCCEEEE	ECC
2101 2110 2120 2130 2140 2150 2160 HTFCSFDNIKYICNSSLFINPFPYICFLKILNKPLSMNEVLYEFYTFSKLFNETSYESYNLHYIIHFI CCCCCCCCEEEEEECCCCCCCCCEEEEEEEECCCCCCEEEE	ECC
2171 2180 2190 2200 2210 2220 2230 YFESKNKNNISYSSNDTSLCNSYDHNCSEGKYLHFYITENYDVHIYPIEQVKNYYYSVSLISIKNKKI CCCCCCCCCCCCEECCCCCCCCCCCCEEEEEEEEECCEEEE	EEE
2241 2250 2260 2270 2280 2290 2300 FNSINEQSNNLNIHLKNYIILPEHHWTILAVINLTHINKLGYHCLVGGTNGNSHICINGFDLSIGVLE ECCCCCHCCCCEEEEEEEECCCCCEEEEEEEECCCCCCCEEEECCCC	ннс
2311 2320 2330 2340 2350 2360 2370 QNEYIYEEQLSLEDSFTSISDTLNGFSLLNEYMKVDSITKEKNNNNNDDDDDDLLCNSYDKKINKYND CCCEEEECCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	

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2381 2390 2400 2410 2420 2430 2440 SDFDNVHIRNANKSYSTFCGCGYNLONELNKNILITTTCRNYEOTFFINSTKVGITOACLDPITCIGNCA

SINNEFLSPFGSYKFLRIIFDYVSDEQIRQFYYSLKL CCCCCCCCCCEEEEEEECCCCHHHHHHHHHCCCC

Disordered segment motifs: (help)

139 ELM motif(s) in total found in disordered residues

SS Motif for disorder segment 1:

(start,end): (1,27)

10 : MSCINKLPLFIILIIYETLNKNWGAKN s.s. : ссссссенинининининсссссении alpha: 0012223455555554554432234666 beta : 000100001334443211100000000 coil: 987676542000001223456655322

SS Motif for disorder segment 2:

(start,end): (249,259)

249 CINNEKEKSII S.S. : EECCHHHHHHH alpha: 32237788889 beta : 5420000000 coil: 12562211100

SS Motif for disorder segment 3:

(start.end): (270,280)

270 : SLLRYVNSNYD : нининиссссс s.s. alpha: 77776531112 beta : 11111110000 coil: 00111357777

SS Motif for disorder segment 4:

303

(start,end): (294,331) 294

seq : IPINEFLDCVFKRGSNLERIQKKITFLLYLPLLILICS s.s. : ссинининиссссссининининининининини alpha: 00566665442100027899887766666789999999 beta: 2100001112210000000000112211000000000 coil: 77322223334789872100001111112110000000

313

323

SS Motif for disorder segment 5:

(start,end): (342,450)

361 371 381 391 : YKNVKRREDVTICPFDKNYKQRSKKKHINKVDNSNVNNNNISEYKKKKDCSKRNEINIIDMNDRKEMNFC alpha: 321111111000001111223222333322212222222567765321122111112212223343322 coil : 246777777546677886655666555655677767776321224567776777676566666544566 421 431 441 412 DSNNLFINEISQPKKFHHNIYSDDNITRCNLFSAENYVF : СССССНИСССССССССССССССССССССССССНИНИНИ alpha: 222245544210223221111233222333211676555 beta: 00000000100001111233210111000011000001 coil: 677753344578765566655445666556666223343

Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil)

Linear motif(s):

residues (16,19) LIG_PDZ_3 =

Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil)

Linear motif(s):

Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

residues (274,277) $LIG_SH2_STAT5 = YVNS$

Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

residues (297,300) LIG_PDZ_3 =

residues (310,313) LIG PDZ 3 = LERI residues (313,320) LIG_PP1 = **IQKKITFL** residues (315,323) LIG_MAPK_1 = KKITFLLYL residues (316,322) LIG_FHA_1 = KITFLLY residues (322,325) $LIG_SH2_STAT5 = YLPL$

Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

residues (342,345) $LIG_SH2_GRB2 = YKNV$ residues (343,353) LIG_MAPK_1 = KNVKRREDVTI residues (348,351) LIG_PDZ_3 = REDV residues (348,354) LIG_14-3-3_2 = REDVTIC residues (393,399) LIG_MAPK_1 = KRNEINI

residues (434,437) LIG_PDZ_3 =

DDNI

SS Motif for disorder segment 6: Graph of Probability(helix, strand, (start,end): (473,502) Amino SS Probability(helix, strand, coil) TXT 473 482 492 seq : LFCLCNYDEHREESFIIIDDSINCEDMKSS S.S.: HHCCCCCCCCCCEEEEECCCCCCHHHCCH **Linear motif(s):** alpha: 5433211111111111000001114665344 beta: 222111100002357887410110000000 residues (479.482) coil: 124456777776531101478774334654 $LIG_SH2_SRC = YDEH$ residues (491,494) LIG_PDZ_3 = residues (494,498) LIG RB = INCED Graph of Probability(helix, strand, SS Motif for disorder segment 7: coil) PDF (start,end): (525,537) Amino SS Probability(helix, strand, coil) TXT : QLLRKYVKRYQAV **Linear motif(s):** s.s. : нининининини alpha: 9999877677788 beta : 0000000000000 residues (530,533) coil: 0000122322110 $LIG_SH2_STAT5 = YVKR$ SS Motif for disorder segment 8: Graph of Probability(helix, strand, (start,end): (543,552) coil) PDF Amino SS Probability(helix, strand, coil) TXT seq : ILQQKAKIIN S.S. : HHHHHHHHHC alpha: 9999988753 **Linear motif(s):** beta : 0000000000 coil: 0000011246 Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, SS Motif for disorder segment 9: strand, coil) TXT (start,end): (566,591) Linear motif(s): seq : FHKKFWITINPSLYYNYKNGLYNNNI residues (568,574) S.S.: HHHHHHHCCCCCCHHHCCCCCCCCC alpha: 87777653102343332222232223 $LIG_MAPK_1 = KKFWITI$ beta: 0000000100123322100111013 residues (579.582) coil: 01122235787532234676556653 $LIG_SH2_GRB2 = YYNY$ residues (587,590) LIG_SH2_GRB2 = YNNN SS Motif for disorder segment 10: (start,end): (616,700) Graph of Probability(helix, strand, 635 645 675 616 625 655 665 : ERKDPHRFFFDIHTIEKGKKKKKNVSNTRDCFDNDEGNKMCHMKLYSSCRIRNNKSNICHSVEKNNIKEY coil) PDF Amino SS Probability(helix, strand, coil) TXT beta: 6410000122112110000001121110011110000123321122211121100001111222101221 coil : 2479887655544433457777666777655677778754335444445545678876666544675445 686 695 **Linear motif(s):** : DKKEKEITNKRNNMW seq s.s. : CCCCCCCCCCCCHH alpha: 111122222443358 beta: 000000000000000 coil: 778776676555541 SS Motif for disorder segment 11: Graph of Probability(helix, strand, (start,end): (709,722) coil) PDF Amino SS Probability(helix, 709 strand, coil) TXT seq : QNVKKKDTFLYSFS s.s.: нисссссиннини alpha: 43322333444456 **Linear motif(s):** beta : 22221112333322 coil : 23455554211111 SS Motif for disorder segment 12: Graph of Probability(helix, strand, (start,end): (741,747) coil) PDF Amino SS Probability(helix, strand, coil) TXT seq : HIKNFIK s.s. : нинини alpha: 8988888 **Linear motif(s):** beta: 0000000 coil : 0001111 SS Motif for disorder segment 13: Graph of Probability(helix, strand, (start.end): (753.758) coil) PDF Amino SS Probability(helix, strand, coil) TXT seq : SILCNI

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S.S.: ННИННН alpha: 666667 beta: 332211 coil: 000111

Linear motif(s):

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Graph of Probability(helix, strand, coil) PDF
Amino SS Probability(helix, strand, coil) TXT
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Linear motif(s):

```
residues (781,789)
    LIG_MAPK_1 = KKIIYIISF
            residues (785,788)
       LIG SH2 STAT5 = YIIS
            residues (791,798)
        LIG_ULM_U2AF65_1 =
                KKRKRKWL
            residues (791.800)
LIG_MAPK_1 = KKRKRKWLGI
            residues (796,800)
     LIG_CYCLIN_1 = KWLGI
residues (802,808) LIG_14-3-3 2
                  = RKFKTLI
            residues (805,808)
       LIG CYCLIN 1 = KTLI
            residues (833,843)
              LIG_MAPK_1 =
             KKEQKLKSLLL
residues (837,843) LIG_NRBOX
                 = KLKSLLL
            residues (839.843)
     LIG_CYCLIN_1 = KSLLL
 residues (850,856) LIG_FHA_2
                 = YYTDDEE
            residues (851,854)
      LIG\_SH2\_STAT5 = YTDD
residues (855,858) LIG_PDZ_3 =
            residues (885,892)
   LIG_MAPK_1 = KRHKLLNI
            residues (888,892)
      LIG_CYCLIN_1 = KLLNI
```

Graph of Probability(helix, strand, coil) PDF
Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

residues (924,931) LIG_MAPK_1 = KKYPLISL

Graph of Probability(helix, strand, coil) PDF
Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

Graph of Probability(helix, strand, coil) PDF
Amino SS Probability(helix, strand, coil) TXT

 $Linear\ motif(s):$

residues (958,966) LIG_MAPK_1 = KFTKKFVKV

Graph of Probability(helix, strand, coil) PDF
Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

residues (991,994) LIG_SH2_GRB2 = YGNL residues (998,1006) LIG_EH1_1 = NYNISHILF

SS Motif for disorder segment 14:

(start,end): (771,892)

SS Motif for disorder segment 15:

(start,end): (923,931)

seq : EKKYPLISL S.S. : HHCCCCCCH alpha: 653111007 beta : 000000100 coil : 245788882

SS Motif for disorder segment 16:

(start,end): (940,951)

940 949
seq : KNHFFETDMFLI
S.S. : HCCCCCCCHHH
alpha: 631111234899
beta : 000111100000
coil : 367766654100

SS Motif for disorder segment 17:

(start,end): (956,976)

956 965 975
seq : FLKFTKKFVKVLRRKKYEQSY
S.S.: HHHHHHHHHHHHHHCCCCCL
heta: 00000001222111000001
coil : 000012110000234567764

SS Motif for disorder segment 18:

(start.end): (984.1014)

 seq :
 WGMSILNYGNLRDINYNISHILFHVYSILMK

 S.S. :
 CCCCCCCCCCHHHHHCCCCCHHHHHHHHHH

 alpha:
 3223332111556543234667777889999

 beta :
 2112322100000011100012221100000

 coil :
 46643356773323456552100000000000

Graph of Probability(helix, strand, coil) PDF
Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

residues (1031.1034) $LIG_SH2_STAT5 = YVNN$ residues (1047,1050) LIG SH2 GRB2 = YNNM residues (1069,1076) LIG_MAPK_1 = KIKNNILI residues (1082,1085) $LIG_PDZ_3 = DDNV$ residues (1094,1097) $LIG_PDZ_3 = CDEI$ residues (1106,1109) LIG SH2 GRB2 = YGNS residues (1155,1158) $LIG_SH2_STAT5 = YINK$ residues (1160,1164) LIG_BRCT_BRCA1_1 = NSETF residues (1174,1177) LIG SH2 SRC = YDIS residues (1185,1188) LIG_SH2_STAT3 = YKKQ

Graph of Probability(helix, strand, coil) PDF
Amino SS Probability(helix,

Linear motif(s):

strand, coil) TXT

residues (1224,1228)
LIG_BRCT_BRCA1_1 = VSEFF
residues (1224,1230)
LIG_BRCT_BRCA1_2 =
VSEFFFK
residues (1240,1243)
LIG_SH2_STAT5 = YICN
residues (1252,1255)
LIG_SH2_STAT3 = YRNQ
residues (1263,1266)
LIG_PDZ_3 = FEYI
residues (1265,1268)

LIG_SH2_STAT5 = YIKK residues (1271,1274) LIG_SH2_STAT3 = YKNQ residues (1279,1287)

LIG_EH1_1 = RYNICSIIN residues (1298,1304) LIG_FHA_1 = DNTDNID

residues (1300,1303) LIG_PDZ_3 = TDNI residues (1308,1314) LIG_FHA_1 = SITDFIN

residues (1310,1313) LIG_PDZ_3 = TDF1 residues (1315,1322)

LIG_MAPK_1 = KKVLDIDF residues (1316,1320) LIG_CYCLIN_1 = KVLDI

residues (1326,1329) LIG_PDZ_3 = YEKL

residues (1331,1340) LIG_MAPK_1 = KNSKHYFINI

residues (1336,1339) LIG_SH2_STAT5 = YFIN

residues (1344,1347) LIG_PDZ_3 = KDYL residues (1346,1349)

LIG_SH2_STAT5 = YLNI residues (1350,1353)

LIG_PDZ_3 = NELI residues (1359,1362)

LIG_PDZ_3 = SDNI residues (1375,1383)

LIG_MAPK_1 = KRNKKKLKI residues (1379,1383) LIG_CYCLIN_1 = KKLKI

Graph of Probability(helix, strand, coil) PDF

SS Motif for disorder segment 19:

(start,end): (1029,1201)

1058 : YPYVNNNAMKGNMSLINMYNNMCNFSFDKNNLYEEEKQSQKIKNNILIEQNFLDDNVNMDIKDDPCDEIE alpha: 33321123321234555543222111113346666543210112222221111111110001000012333 : DMNMLQMYGNSFCQSFMPLYNHNFNRKNDQSIHMEETYMCDRERFNCLDKYMCSNTYINKRNSETFVNAH alpha: 33210000000011113332122233344555555432211211110123211000000000111111 beta: 1013688851011100100000111000001111101121101233432112210233221002466532 1188 1169 1198 : KGEYKYDISSDMNLIDYKKQSTRTKNFKGQRIF alpha: 101111112111234321100111111011111 beta: 1112332221011111111111011012113467 coil: 77654455567764446777777777775320

SS Motif for disorder segment 20:

(start,end): (1223,1386)

1242 1252 1262 1272 : DVSEFFFKIYHTHICEKYICNNLINLWGCYRNQNIYMKRFFEYIKKGEYKNQQNIIRYNICSIINEKRDD : НИНИНИНССССССИНИНИНИНСИНИНИНСССССССИНИНИНИНИНИНИНИНЕ alpha: 688887643233345666665445544322333467899999886544434343332222322001111 coil : 2110013554443321111245322235555665210000000012455554432112455556887778 1293 1302 1312 1322 1332 1342 1352 : NNNNIDNTDNIDNILSITDFINKKVLDIDFYNEYEKLSKNSKHYFINISEEKDYLNINELINFSKASDNI alpha: 11000000013332114566533332223566676531335889998875211111134666544332238 coil: 876567888865422422223565333332232235866310000012468855533222344567761 1372 : EELKRLONNLIEKRNKKKLKIFSL : нинининининининини alpha: 999999877776654555555555 beta: 00000000111111111122333 coil: 000000012111123322221111

CSpritz PID: 1932353729 Amino SS Probability(helix, 1392 1401 1411 1421 1431 strand, coil) seq : MPVHIIDDYEMYLDEDDIKLIKERKRNFNILLENMSEQIMD S.S.: ССЕЕЕСССИННССИНИННИННИНССИНИННИННИН alpha: 11122233355521778999998764344444554579999 Linear motif(s): beta: 1245541001111000000000000023443100000000 coil: 76322356532257221000001234532111245410000 residues (1403,1406) LIG_SH2_STAT5 = YLDE residues (1406.1409) $LIG_PDZ_3 = EDDI$ residues (1413,1423) LIG_MAPK_1 = KERKRNFNILL residues (1427,1430) $LIG_PDZ_3 = SEQI$ Graph of Probability(helix, strand, Amino SS Probability(helix, strand, coil) Linear motif(s): SS Motif for disorder segment 22: (start,end): (1452,1526) residues (1459.1462) $LIG_PDZ_3 = GEFL$ residues (1479,1488) seq : GSSLNIRGEFLEAYSKKIVSEKNKNNIKELKTNIIDIKHIYNKGDDEDTDNLLNIKYIDILNKNKNDYMN LIG MAPK 1 = KELKTNIIDI residues (1481,1487) alpha: 0111111578887522223333211123343322111122210011223345567777766421112111 $LIG_FHA_1 = LKTNIID$ residues (1498,1504) coil: 7632346310012466533234678864333455555543346887776653331111112467776544 LIG FHA 1 = EDTDNLL seq : YQYIK residues (1500,1503) S.S. : EEEEC $LIG_PDZ_3 = TDNL$ alpha: 33332 residues (1508,1511) beta : 34442 $LIG_SH2_STAT5 = YIDI$ coil: 21124 residues (1509,1512) $LIG_PDZ_3 = IDIL$ residues (1519,1522) LIG_SH2_GRB2 = YMNY residues (1522,1525) $LIG_SH2_SRC = YQYI$ Graph of Probability(helix, strand, SS Motif for disorder segment 23: (start,end): (1531,1558) Amino SS Probability(helix, strand, coil) 1531 1540 1550 seq : LLLIHNNYKGCVGITGDLKGMNFYHSNA Linear motif(s): S.S. : EEEEECCCCCCCEECCCCCEECCCCE alpha: 00000000000000011000000000 beta: 7888631222344543222345431015 residues (1543,1549) coil: 2001367667654446666554457874 LIG_FHA_1 = GITGDLK SS Motif for disorder segment 24: Graph of Probability(helix, strand, (start,end): (1568,1570) Amino SS Probability(helix, strand, coil) seq : LPT S.S. : CCC alpha: 001 Linear motif(s): beta : 100 coil: 787 Graph of Probability(helix, strand, SS Motif for disorder segment 25: (start.end): (1583,1590) Amino SS Probability(helix, strand, coil) seq : KKKYRNIS s.s. : ccccccc Linear motif(s): alpha: 11111110 beta : 00011001 residues (1586,1589) coil: 77776787 LIG_SH2_GRB2 = YRNI SS Motif for disorder segment 26: Graph of Probability(helix, strand, (start,end): (1604,1711) Amino SS Probability(helix, 1604 1623 1633 1643 1653 1663 strand, coil) : LFVLSLNEDGLEDIEIYITNVELLSDYYKKMNYIQDIKTATHYHRLKDISKVLNYNNGIYIKSNMITKKC Linear motif(s): alpha: 0000000000000000012333345677777887533211000011100000000000011111233 beta: 689974100245678886333321000000000110000001121013666532113899742110000 residues (1611,1614) 1674 1683 1693 1703 $LIG_PDZ_3 = EDGL$: KKYKKYKIYKIYKIGKNYNMRNNIIKKKKWNLINITKS residues (1620,1623) : СНИНИНИНИНИНИНИНИНИНЕЕСССССЕЕЕЕСС LIG SH2 STAT5 = YITN alpha: 34455666677766544555544332211122211111 residues (1620,1626) beta: 11112221111110001000011344322334555432 coil: 44431111111112444333344322355543223456 LIG_FHA_2 = YITNVEL

TXT

coil) PDF

coil) PDF

coil) PDF

coil) PDF

coil) PDF

residues (1624,1627) LIG_PDZ_3 = VELL residues (1636,1639)

TXT

TXT

TXT

TXT

TXT

 $LIG_SH2_STAT5 = YIQD$

TXT

TXT

IKCKE

TXT

TXT

TXT

```
residues (1654,1658)
                                                                                                                 LIG CYCLIN 1 = KVLNY
                                                                                                                      residues (1658,1661)
                                                                                                                 LIG\_SH2\_GRB2 = YNNG
                                                                                                                      residues (1663,1666)
                                                                                                                  LIG_SH2_STAT5 = YIKS
                                                                                                                      residues (1699,1704)
                                                                                                                    LIG_ULM_U2AF65_1 =
                                                                                                                               KKKKWN
                                                                                                                      residues (1699,1708)
                                                                                                           LIG_MAPK_1 = KKKKWNLINI
                                                                                                           Graph of Probability(helix, strand,
SS Motif for disorder segment 27:
                                                                                                                               coil) PDF
(start,end): (1724,1733)
                                                                                                                 Amino SS Probability(helix,
                                                                                                                        strand, coil)
    : ISFISHEILN
                                                                                                                   Linear motif(s):
     : СССССИННИ
alpha: 3322245554
beta : 3222223333
coil : 3444421012
                                                                                                                      residues (1729,1732)
                                                                                                                       LIG_PDZ_3 = HEIL
                                                                                                           Graph of Probability(helix, strand,
                                                                                                                              coil) PDF
                                                                                                                 Amino SS Probability(helix,
                                                                                                                        strand, coil)
SS Motif for disorder segment 28:
(start,end): (1741,1808)
                                                                                                                   Linear motif(s):
                                    1770
       1741
                          1760
                                              1780
                                                        1790
                                                                                                                      residues (1767,1770)
    : CLFGNSCFGNNNIGICSSFKIFNFLNKEEIKCRYKIIKNIKCKEMLGDNIKIQDDNNNNNNNNNYNYYN
                                                                                                                       LIG_PDZ_3 = KEEI
     alpha: 1110111100000011235677876467887766666543222221111111112222111111111110
                                                                                                            residues (1780,1784) LIG_RB =
beta: 76411111100134442111110000000000112222221113331124555421001112345676
coil: 12477666788754345421001135321111211112346654446664322356776666543212
                                                                                                                      residues (1783,1786)
                                                                                                                      LIG_PDZ_3 = KEML
                                                                                                                      residues (1787,1790)
                                                                                                                      LIG_PDZ_3 = GDNI
SS Motif for disorder segment 29:
                                                                                                           Graph of Probability(helix, strand,
(start,end): (1814,1816)
                                                                                                                               coil) PDF
                                                                                                                 Amino SS Probability(helix,
                                                                                                                        strand, coil)
seq : IEG
S.S. : EEE
alpha: 000
                                                                                                                   Linear motif(s):
beta : 887
coil : 112
SS Motif for disorder segment 30:
                                                                                                           Graph of Probability(helix, strand,
(start,end): (1820,1823)
                                                                                                                               coil) PDF
                                                                                                                 Amino SS Probability(helix,
                                                                                                                        strand, coil)
seq : RETK
s.s. : cccc
alpha: 1100
                                                                                                                   Linear motif(s):
beta : 3100
coil: 5788
                                                                                                           Graph of Probability(helix, strand,
                                                                                                                               coil) PDF
SS Motif for disorder segment 31:
                                                                                                                 Amino SS Probability(helix,
(start,end): (1835,1850)
                                                                                                                        strand, coil)
       1835
                1844
                                                                                                                   Linear motif(s):
seq : QSSKYTNRVIPFINDS
S.S. : CCCCCCEEEEECCC
alpha: 2111000000000002
                                                                                                                      residues (1838,1844)
beta: 2100013688875200
                                                                                                                  LIG_FHA_1 = KYTNRVI
coil: 4678876311124797
                                                                                                                      residues (1839,1842)
                                                                                                                 LIG SH2 STAT5 = YTNR
                                                                                                           Graph of Probability(helix, strand,
SS Motif for disorder segment 32:
(start,end): (1864,1954)
                                                                                                                               coil) PDF
                                                                                                                 Amino SS Probability(helix,
                                                                                                                        strand, coil)
       1864
                1873
                          1883
                                    1893
                                              1903
                                                        1913
seq : IYKNNINLSNMNYYEDICDKYNDFSEGTKKHIIHHNSNQNISCWQEEKSKNVDMVKKKNIYINYNNDDNI
Linear motif(s):
alpha: 21100001110001221003555543211111111111100000111222223443222222211001223
beta: 553101100000100010000000000024554200122211000011111112233355542100002
                                                                                                                      residues (1865,1868)
coil : 2357878788888777788643334577763224677766677777765664444444422246788764
       1934
                1943
                          1953
                                                                                                                 LIG\_SH2\_GRB2 = YKNN
seq : INNYSSIDCRIIHIKNKDHYG
                                                                                                                      residues (1877,1880)
s.s. : CCCCCCCCEEEEECCCCCCC
                                                                                                                    LIG_SH2_SRC = YEDI
alpha: 321111100000000023210
                                                                                                                      residues (1915,1918)
beta: 221111223688873000122
                                                                                                                      LIG_PDZ_3 = VDMV
coil: 34666665200025866566
                                                                                                                      residues (1919,1925)
                                                                                                                LIG\_MAPK\_1 = KKKNIYI
```

residues (1924,1927) LIG SH2 STAT5 = YINY residues (1930,1933) $LIG_PDZ_3 = DDNI$ coil) PDF Amino SS Probability(helix, strand, coil) TXT **Linear motif(s):** residues (1977,1981) coil) PDF Amino SS Probability(helix, strand, coil) TXT **Linear motif(s):** coil) PDF Amino SS Probability(helix, strand, coil) TXT **Linear motif(s):** coil) PDF Amino SS Probability(helix, strand, coil) Linear motif(s): $3_3 = KSISYS$ coil) PDF Amino SS Probability(helix, strand, coil) TXT

SS Motif for disorder segment 37:

SS Motif for disorder segment 36:

SS Motif for disorder segment 33:

1973 seq : GRQDVPKIYGINIFSHNFGLACDL

: CCCCCCEEEEEEECCCCEEECCH alpha: 0000011111111223333333334 beta: 222211455666542113333321

coil: 66677742222234543322344

SS Motif for disorder segment 34:

SS Motif for disorder segment 35:

(start,end): (1964,1987)

1964

(start,end): (1991,1993)

(start.end): (2001,2006)

(start,end): (2023,2032)

seq : KSISYSSLIA S.S. : CCCEHHHEEC

alpha: 1111344320 beta : 1344333443

coil: 6544221125

(start,end): (2051,2055)

seq : IYNELQ S.S. : HHHHHC alpha: 566653

beta : 221111 coil : 212235

seq : YNL S.S. : HHE alpha: 433

beta : 235 coil : 221

seq : IQNYT S.S. : EEEEC alpha: 00000 beta : 77653 coil : 11235

SS Motif for disorder segment 38:

(start,end): (2068,2073)

seq : YSIKNM S.S. : CEEEEC alpha: 001111 beta : 365543 coil : 532235

SS Motif for disorder segment 39:

(start,end): (2098,2119)

2098 2107 seq : KGYHTFCSFDNIKYICNSSLFI S.S. : ECCCCCCCCEEEECCCCCC alpha: 000000011110000011211 beta: 5444344421146775212232

SS Motif for disorder segment 40:

(start,end): (2134,2159)

2143 seq : PLSMNEVLYEFYTFSKLFNETSYESY : CCCCEEEEEEEECCCCCCCCCCCC alpha: 000223222222112222210011 beta: 33323466655433110111234211 coil: 66643110111234666665545677 Graph of Probability(helix, strand,

LIG_BRCT_BRCA1_1 = FSHNF

Graph of Probability(helix, strand,

Graph of Probability(helix, strand,

Graph of Probability(helix, strand,

residues (2023,2028) LIG_14-3-

Graph of Probability(helix, strand,

Linear motif(s):

Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

residues (2106,2109) $LIG_PDZ_3 = FDNI$ residues (2111,2114) LIG_SH2_STAT5 = YICN residues (2114,2118) LIG_BRCT_BRCA1_1 = NSSLF

Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

residues (2138,2141) $LIG_PDZ_3 = NEVL$

residues (2145,2148) LIG SH2 STAT5 = YTFS residues (2147,2151) LIG BRCT BRCA1 1 = FSKLF residues (2152,2158) LIG_FHA_2 = NETSYES Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) TXT **Linear motif(s):** residues (2171,2174) LIG_SH2_STAT5 = YFES Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) Linear motif(s): residues (2240,2243) LIG SH2 STAT5 = YFNS Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) Linear motif(s): Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) **Linear motif(s):** residues (2312,2315) $LIG_PDZ_3 = NEYI$ residues (2314,2317) LIG SH2 STAT5 = YIYE residues (2316,2319) $LIG_SH2_STAT3 = YEEQ$ residues (2317,2320) LIG PDZ 3 = EEQLresidues (2330,2333) $LIG_PDZ_3 = SDTL$ residues (2345,2348) $LIG_PDZ_3 = VDSI$ residues (2361,2364) $LIG_PDZ_3 = DDDL$ residues (2376,2379) LIG SH2 GRB2 = YNNN residues (2383,2386) $LIG_PDZ_3 = FDNV$ residues (2391,2395) LIG_USP7_1 = ANKSY residues (2393,2398) LIG_14-3-3 3 = KSYSTFresidues (2403,2406) LIG_SH2_STAT3 = YNLQ Graph of Probability(helix, strand, coil) PDF Amino SS Probability(helix, strand, coil) Linear motif(s): residues (2423,2429) $LIG_FHA_1 = EQTFFIN$ residues (2440,2443) $LIG_PDZ_3 = LDPI$ residues (2454,2457) LIG PDZ 3 = NEFL

TXT

```
SS Motif for disorder segment 41:
(start,end): (2169,2198)
```

2169 2178 2188 seq : FPYFESKNKNNISYSSNDTSLCNSYDHNCS alpha: 001100011000000100000001111000 beta : 211101000113554211234431100000 coil: 677787888875434677754457778888

SS Motif for disorder segment 42:

(start,end): (2240,2252)

2240 seq : YFNSINEQSNNLN : EECCCCCHCCCCE alpha: 0112334433211 beta: 7641101121124 coil: 1245554445554

SS Motif for disorder segment 43:

(start,end): (2279,2294)

2279 2288 seq : KLGYHCLVGGTNGNSH S.S. : CCCCEEECCCCCCC alpha: 1100000000000000 beta: 2113778743210148 coil: 6775211256788851

SS Motif for disorder segment 44:

(start,end): (2303,2412)

2303 2312 2322 2332 2342 2352 2362 alpha: 23444433222211111112221100111221111233444444432222221111112222111111101 beta: 5444443100145543222111100111122111210001122111122332222111113443211001 coil : 2110013576632235556666778766655677655554332334654444566666654334667887 2382 2402 2373 2392 : INKYNNNVSDFDNVHIRNANKSYSTFCGCGYNLONELNKN alpha: 1121100111112346676654443211111122233233 beta: 22221111111001111110000112332223432110012 coil: 5555788777776431112234433345665444555654

SS Motif for disorder segment 45:

(start,end): (2421,2461)

2421 2430 2440 2450 2460 : NYEQTFFINSTKVGITQACLDPITCIGNCASINNEFLSPFG alpha: 0000000000000001111000100011221111211110 beta: 21358998511346664321014554222222102332111 coil: 77641001477643234456874334665556775446777

residues (2455,2460) $LIG_WW_4 = EFLSPF$

TXT

12/01/2022, 15:28 CSpritz PID: 1932353729

SS Motif for disorder segment 46:

(start,end): (2473,2487)

2473 2482
seq : VSDEQIRQFYYSLKL
S.S. : CCHHHHHHHHHCCCC
alpha: 006776666654100
beta : 200012222111000
coil : 683211001124899

Graph of Probability(helix, strand, coil) PDF
Amino SS Probability(helix, strand, coil) TXT

Linear motif(s):

residues (2475,2478) LIG_PDZ_3 = DEQI

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