

Patient 1

1 AVTFFMVPFTLNFTITNLQYEEDMR|HPGSR|K|FNATER|ELQGLLKPLFR|NSSLEYLYSGCR|LASLRPEK|DSSAMAVDAICTHRPDPEDLGLDR|ER|LYWELSNLTNGIQELGPYTLDR|NSLYVNGFTHR|SSMPTTSTPGTSTVDVGTSGTPSSSPST
2 AAGPLLMPFTLNFTITNLQYEEDMR|R|TGSR|K|FNTMESVLQGLLKPLFK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGLNR|EQLYWELSK|LTDNIEELGPYTLDR|NSLYVNGFTHQSSVSTTSTPGTSTVDLR|TSGTPSSLSPTIM
3 AAGPLLVPFTLNFTITNLQYEDMGHPGSR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICHHLDPK|SPGLNR|ER|LYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHR|TSVPTSSTPGTSTVDLGTSGTPFSLPSP
4 TAGPLLVLFTLNFTITNLK|YEEDMHRPGR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGLDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHWIPVPTSSTPGTSTVDLGTSGTPSSLPSP
5 AAGPLLVPFTLNFTITNLQYEEDMHRPGR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
6 SAGPLLVPFTLNFTITNLQYEEDMR|HPGSR|K|FNTER|VLQGLLKPFLK|STSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
7 SAGPLLVPFTLNFTITNLQYEEDMHRPGR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGLNR|EQLYWELSQLTHGNIK|ELGPYTLDR|NSLYVNGFTHR|SSVAPTSTPGTSTVDLGTSGTPSSLPSP
8 TAVPLLVPFTLNFTITNLQYEDMR|HPGSR|K|FNTER|VLQGLLGPFIK|NSSVGPLYSGCR|LISLR|SEK|DGAATGVDAICTHHLNQPSPGLDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHR|SSGLTTSTPWTSTVDLGTSGTPSPVPSPT
9 TAGPLLVPFTLNFTITNLQYEEDMHRPGR|K|FNATER|VLQGLLSPFIK|NSSVGPLYSGCR|LTLRPEK|DGAATGMADVCLYHPNPK|RPGLDR|EQLYWELSQLTHNITELGPYSLDR|DSLYVNGFTHQNSVPTTSTPGTSTVYWATTGTPSSFPGHT
10 EPGPLLIPFTNFITNLHYEENMQHPGSR|K|FNTER|VLQGLLKPFLK|NTSVGPLYSGCR|LTLRPEK|DGAATGMADVCLYHPNPK|RPGLDR|EQLYCELSQLTHNITELGPYSLDR|DSLYVNGFTHQNSVPTTSTPGTSTVYWATTGTPSSFPGHT
11 EPGPLLIPFTNFITNLHYEENMQHPGSR|K|FNTER|VLQGLLKPFLK|NTSVGPLYSGCR|LTLRPEK|HEAATGVDICTHR|VDPIGPGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
12 APVLLIPFTLNFTITNLHYEENMQHPGSR|K|FNTER|VLQGLLKPFLK|NTSVGPLYSGCR|LTLRPEK|HEAATGVDICTHR|VDPIGPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
13 SAGPLLVPFTLNFTITNLQYEEDMHRPGR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|NGAATGMDAICSHR|LDPK|SPGLDR|EQLYWELSQLTHGNIK|ELGPYTLDR|NSLYVNGFTHR|SSVAPTSTPGTSTVDLGTSGTPSSLPSP
14 TAVPLLVPFTLNFTITNLQYEDMR|HPGSR|K|FNTER|VLQGLLGPFIK|NSSVGPLYSGCR|LISLR|SEK|DGAATGVDAICTHHLNQPSPGLDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHR|SSGLTTSTPWTSTVDLGTSGTPSPVPSPT
15 TAGPLLVPFTLNFTITNLQYEEDMHRPGR|K|FNATER|VLQGLLSPFIK|NSSVGPLYSGCR|LTLRPEK|DGAATGMADVCLYHPNPK|RPGLDR|EQLYWELSQLTHNITELGPYSLDR|DSLYVNGFTHQSSMTTTR|TPDTSTMHLATS|TPASLSGPT
16 TAVPLLVPFTLNFTITNLQYEEDMR|R|TGSR|K|FNTMESVLQGLLKPLFK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGLNR|EQLYWELSK|LTDNIEELGPYTLDR|NSLYVNGFTHQSSVSTTSTPGTSTVDLR|TSGTPSSLSPT
17 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLRPLFK|NTSVSSLYSGCR|LTLRPEK|DGAATR|VDAACTYRPDPK|SPGLDR|EQLYWELSQLTHSITELGPYTLDR|VSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
18 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLKPFLK|NSSLEYLYSGCR|LASLRPEK|DSSAMAVDAICTHRPDPEDLGLDR|ER|LYWELSNLTNGIQELGPYTLDR|NSLYVNGFTHR|SSFLTSTPWTSTVDLGTSGTPSPVPSPT
19 TAGPLLVPFTLNFTITNLQYEEDMHRPGR|R|FNTER|VLQGLLTPFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDICTHR|VDPIGPGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
20 APVLLIPFTLNFTITDLHYEENMQHPGSR|K|FNTER|VLQGLLKPFLK|STSVGPLYSGCR|LTLRPEK|HGAATGVDAICTLR|LDPTGPGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSAVHLETSGTPASLPGHT
21 APGPLLVPFTLNFTITNLQYEEDMR|HPGSR|K|FNTER|VLQGLLKPFLK|NTSVSSLYSGCR|LTLRPEK|DGAATR|VDAVCTHRPDPK|SPGLDR|ER|LYWK|LSQLTHGITELGPYTLDR|HSLYVNGFTHQSSMTTTR|TPDTSTMHLATS|TPASLSGPT
22 TASPLLVLFTNFITINQR|YEENMHRPGR|K|FNTER|VLQGLLRPVFK|NTSVGPLYSGCR|LTLRPEK|DGAATK|VDAICTYRPDPK|SPGLDR|EQLYWELSQLTHSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSAVHLETSGTPASLPGHT
23 APGPLLVPFTLNFTITNLQYEEDMR|HPGSR|K|FNTER|VLQGLLKPFLK|STSVGPLYSGCR|LTLRPEK|R|GAATGVDICTHR|LDPLNPGGLDR|EQLYWELSK|LTR|GIELGPYLLDR|GSLYVNGFTHR|TSVPTTSTPGTSTVDLGTSGTPFSLPSPA
24 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHWIPVPTSSTPGTSTVDLGTSGTPSSLPSP
25 TAGPLLVPFTLNFTITNLK|YEEDMHCPGR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWEK|SQLTNGIK|ELGPYTLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
26 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLXPFXK|XSVGXLYSGCR|LTLRPEK|XEAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHWIPVPTSSTPGTSTVDLGTSGTPSSLPSP
27 TAGPLLVPFTLNFTITNLK|YEEDMHCPGR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
28 SAGPLLVPFTLNFTITNLQYEEDMHRPGR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|NGAATGMDAICTHR|LDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
29 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLKPFLK|NSSLEYLYSGCR|LASLRPEK|DSSAMAVDAICTHRPDPEDLGLDR|ER|LYWELSNLTNGIQELGPYTLDR|NSLYVNGFTHR|SSMPTTSTPGTSTVDVGTSGTPSSSPST
30 TAGLLIPFTLNFTITNLQYEDMGHPGSR|K|FNTER|VLQGLLSPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICHHLDPK|SPGLNR|ER|LYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHR|TSVPTTSTPGTSTVDLGTSGTPFSLPSPA
31 TAGLLVPFTLNFTITNLK|YEEDMHRPGR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
32 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLRPVFK|NTSVGPLYSGCR|LTLRPEK|DGAATK|VDAICTYRPDPK|SPGLDR|EQLYWELSQLTHSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSAVHLETSGTPSSLPGHT
33 EPGPLLIPFTNFITINLR|YEENMQHPGSR|K|FNTER|VLQGLLTPFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDICTHR|VDPIGPGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
34 APVLLIPFTLNFTITDLHYEENMQHPGSR|K|FNTER|VLQGLLKPFLK|STSVGPLYSGCR|LTLRPEK|HGAATGVDAICTLR|LDPTGPGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
35 TAGPLLVPFTLNFTITNLK|YEEDMHCPGR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
36 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLXPFXK|XSVGXLYSGCR|LTLRPEK|XEAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|DSLYVNGFTHR|SSMPTTSTPGTSAVHLETSGTPASLPGHT
37 APGPLLVPFTLNFTITNLQYEEDMR|HPGSR|K|FNTER|VLQGLLKPFLK|STSVGPLYSGCR|LTLRPEK|R|GAATGVDICTHR|LDPLNPGGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
38 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLXPFXK|XSVGXLYSGCR|LTLRPEK|XEAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
39 APVLLIPFTLNFTITNLHYEENMQHPGSR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|NGAATGMDAICSHR|LDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
40 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLXPFXK|XSVGXLYSGCR|LTLRPEK|XEAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
41 EPGPLLIPFTNFITINLR|YEENMQHPGSR|K|FNTER|VLQGLLTPFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDICTHR|VDPIGPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
42 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLXPFXK|XSVGXLYSGCR|LTLRPEK|XEAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
43 APVLLIPFTLNFTITNLHYEENMQHPGSR|K|FNTER|VLQGLLKPFLK|STSVGPLYSGCR|LTLRPEK|HGAATGVDAICTLR|LDPTGPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
44 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLXPFXK|XSVGXLYSGCR|LTLRPEK|XEAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHR|TSVPTTSTPGTSTVHLATSGTPSSLPGHT
45 APVLLIPFTLNFTITNLQYEEDMHRPGR|K|FNTER|VLQGLLSPFIK|NSSVGPLYSGCR|LTLRPEK|DGAATGMADVCLYHPNPK|RPGLDR|EQLYCELSQLTHNITELGPYSLDR|DSLYVNGFTHQNSVPTTSTPGTSTVYWATTGTPSSFPGHT
46 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLXPFXK|XSVGXLYSGCR|LTLRPEK|XEAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSPVPSPT
47 TAGPLLVPFTLNFTITNLQYEEDMHRPGR|K|FNATER|VLQGLLSPFIK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDICTHR|VDPIGPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
48 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLXPFXK|XSVGXLYSGCR|LTLRPEK|XEAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHR|SGLTTSTPWTSTVDLGTSGTPSPVPSPT
49 TAGPLLVPFTLNFTITNLQYEEDMHRPGR|K|FNTER|VLQGLLTPFK|NTSVSSLYSGCR|LTLRPEK|DGAATR|VDAVCTHRPDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
50 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLXPFXK|XSVGXLYSGCR|LTLRPEK|XEAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHWIPVPTSSTPGTSTVDLGTSGTPSSLPSP
51 TAGPLLVPFTLNFTITNLQYEDMGHPGSR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICHHLDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
52 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLXPFXK|XSVGXLYSGCR|LTLRPEK|XEAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
53 SAGPLLVPFTLNFTITNLQYEEDMHRPGR|K|FNTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTLRPEK|NGAATR|VDAVCTHRPDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
54 APVLLIPFTLNFTITNLHYEENMQHPGSR|K|FNTER|VLQGLLRPLFK|STSVGPLYSGCR|LTLRPEK|HGAATGVDICTLR|LDPTGPGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSAVHLETSGTPASLPGHT
55 APGPLLVPFTLNFTITNLQYEEDMR|HPGSR|K|FNTER|VLQGLLKPFLK|STSVGPLYSGCR|LTLRPEK|R|GAATGVDICTHR|LDPLNPGGLDR|EQLYWELSK|LTR|GIELGPYLLDR|GSLYVNGFTHR|NFVPTSTPGTSTVHLGTSETPSSLPRI
56 VPGPLLVPFTLNFTITNLQYEEAMR|HPGSR|K|FNTER|VLQGLLRPLFK|NTSVGPLYSGCR|LTLRPEK|DK|AATR|VDAICTHRPDPK|SPGLNR|EQLYWELSQLTHGITELGPYTLDR|DSLYVNGFTHWIPVPTSSTPGTSTVHLGTSETPSSLPRI
57 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNTER|VLQGLLKPFLK|STSVGPLYSGCR|LTLRPEK|DGVATR|VDAICTHRPDPK|IPGLDR|QQLYWELSQLTHSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLGTSETPSSLPRI
58 ATGPVLLPFTLNFTITNLQYEEDMHRPGR|K|FNTER|VLQGLLMPFIK|NTSVSSLYSGCR|LTLRPEK|DGAATR|VDAVCTHRPDPK|SPGLDR|ER|LYWK|LSQLTHGITELGPYTLDR|HSLYVNGFTHQSSMTTTR|TPDTSTMHLATS|TPASLSGPT
59 TASPVLVFTNFITINLR|YEENMHRPGR|K|FNTER|VLQGLLRPVFK|NTSVGPLYSGCR|LTLRPEK|DGAATK|VDAICTYRPDPK|SPGLDR|EQLYWELSQLTHSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVDLGTSGTPSSLPSP
60 AASPLLVLFTLNFTITNLK|YEENMQHPGSR|K|FNTER|VLQGLLR|SLF|STSVGPLYSGCR|LTLRPEK|DGTATGVDAICTHRPDPK|SPR|LDR|EQLYWELSQLTHSITELGHYALDNDLDFVNGFTHR|SSVPTTSTPGTSTVHLGTSETPSSLPRI
61 AASHLLIFLFTNFITINLR|YEENMQHPGSR|K|FNTER|VLQGLLRPLFK|NTSVGPLYSGSR|LTLRPEK|DGAATGVDAICTHRPDPGGLDR|EQLYELSQLTHSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLGTSETPSSLPRI

Incomplete repeats

62 DMGQPSGLK|FNITDNVMQHLLSPLFQR|SSLGAR|YTGR|VIALR|SVK|NGAETR|VDLLCTYLQPLSGPLPK|QVFHLSQQTHGITR|LGPYSLDK|DSLYLNGYNPEGPDEPPTPKPATTFLPPLSEATTAMGYHLK|TLTNFTITNLQYSP
63 DMGK|GSATFNSTEGVLQHLRPLFQK|SSMGPFYLGCLISLRPEK|DGAATGVDTTCTYHPDPVGPGLDIQQLYWELSQLTHGVTQLGFVYVDR|DSLFINGYAPQNSLR|GEYQINFHIVNWNLSNPDPSTSEY

C-terminus

ITLLR|DIQDK|VTTYK|GSQLHDTFR|FCLVTNLTMDSVLVTVK|ALFSSNLDPSLVEQVFLDK|TLNASFHWLWGSTYQLVDIHTVEMESSVYQPTSSSTQHFLYFNFTITNLQYSDK|AQPGETTYQR|NK|R|NIEDALNQLFR|NSSIK|SYFSDCQVSTFR|SVPNR
|HHTGVDSL CNFSPLAR|R|VDR|VAIYEFLR|MTR|NGTQLQNFTLDR|SSVLVDGYSPNR|NEPLTGNDSL PFWAVILIGLAGLLITCLICGLVTVTR|R|R|K|K|EGEYVNVQQCPGYQSHLDLEDLQ

Patient 2

1 ATVPFMVPFTLNFTITNLQYEEEDMR|HPGSR|K|FNATER|ELQGLLKPLFR|NSSLEYLYSGCR|LASLRPEK|DSSAMAVDAICTHRPDPEDLGLDR|ER|LYWELSNLTNGIQELGPYTLDR|NSLYVNGFTHR|SSMPTTSTPGTSTVDVGTSGTPSSSPST
2 AAGPLLMPTLNFTITNLQYEEEDMR|R|TGSR|K|FNMTESVLQGLLKPLFK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGLNR|EQLYWELSK|LTNDIEELGPYTLDR|NSLYVNGFTHQSSVSTTSTPGTSTVDLR|TSGTPSSLSPSTIM
3 AAGPLLVPTLNFTITNLQYEGEDMGHPGSR|K|FNATTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTSR|SEK|DGAATGVDAICHHLDPK|SPGLNR|ER|LYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHR|TSVPTSSSTPGTSTVDLGTSGTPFSLPSP
4 TAGPLLVFTLNFTITNLK|YEEDMHRPGSR|K|FNATTER|VLQTLGPMFK|NTSVGLLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGLDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHWIPVPTSSSTPGTSTVDLGTSGTPSSLPSPT
5 AAGPLLVPTLNFTITNLQYEEEDMHHPGSR|K|FNATTER|VLQGLLGPMPK|NTSVGLLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSPT
6 SAGPLLVPTLNFTITNLQYEEEDMR|HPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSPT
7 SAGPLLVPTLNFTITNLQYEEEDMHHPGSR|K|FNATTER|VLQGLLGPMPK|NTSVGLLYSGCR|LTLRPEDENGAATGMDAICSHR|LDPK|SPGLNR|EQLYWELSQLTHGIK|ELGPYTLDR|NSLYVNGFTHR|SSVAPTSTPGTSTVDLGTSGTPSSLPSPT
8 TAVPLLVPTLNFTITNLQYEGEDMR|HPGSR|K|FNATTER|VLQGLLGPFIK|NSSVGPLYSGCR|LISLR|SEK|DGAATGVDAICTHHLNPOSPGLDR|EQLYWQLSQMTNGIK|ELGPYTLDR|NSLYVNGFTHR|SSGLTTSTPWTTSTVDLGTSGTPSPVPSPT
9 TAGPLLVPTLNFTITNLQYEEEDMHRPGSR|K|FNATER|VLQGLLSPIFK|NSSVGPLYSGCR|LTSRPEK|DGAATGMDAVCLYHPNPK|RPGLDR|EQLYWELSQLTHNITELGPYSLDR|DSLYVNGFTHQNSVPTTSTPGTSTVYVWATTGTPSSFPGHT
10 EPGLLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|NTSVGPLYSGCR|LTLRPEK|DGAATGMDAVCLYHPNPK|RPGLDR|EQLYCELSQLTHNITELGPYSLDR|DSLYVNGFTHQNSVPTTSTPGTSTVYVWATTGTPSSFPGHT
11 EPGLLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|NTSVGPLYSGCR|LTLRPEK|HEAATGVDTICTHR|VDPGPGGLDR|ER|LYWELSQLTHNITELGPYTLDR|DSLYVNGFNPR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
12 APVPLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|NTSVGPLYSGCR|LTLRPEK|HEAATGVDTICTHR|VDPGPGGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
13 SAGPLLVPTLNFTITNLQYEEEDMHHPGSR|K|FNATTER|VLQGLLGPMPK|NTSVGLLYSGCR|LTLRPEK|NGAATGMDAICSHR|LDPK|SPGLDR|EQLYWELSQLTHGIK|ELGPYTLDR|NSLYVNGFTHR|SSVAPTSTPGTSTVDLGTSGTPSSLPSPT
14 TAVPLLVPTLNFTITNLQYEGEDMR|HPGSR|K|FNATTER|VLQGLLGPFIK|NSSVGPLYSGCR|LISLR|SEK|DGAATGVDAICTHHLNPOSPGLDR|EQLYWQLSQMTNGIK|ELGPYTLDR|NSLYVNGFTHR|SSGLTTSTPWTTSTVDLGTSGTPSPVPSPT
15 TAGPLLVPTLNFTITNLQYEEEDMHRPGSR|K|FNATER|VLQGLLSPIFK|NSSVGPLYSGCR|LTSRPEK|DGAATGMDAVCLYHPNPK|RPGLDR|EQLYWELSQLTHNITELGPYSLDR|DSLYVNGFTHQSSMTTTR|TPDTSTMHLATS|R|TPASLSGPT
16 TASPLLVFTINCTITNLQYEEEDMR|R|TGSR|K|FNMTESVLQGLLKPLFK|NTSVGPLYSGCR|LTLRPK|K|DGAATGVDAICTHR|LDPK|SPGLNR|EQLYWELSK|LTNDIEELGPYTLDR|NSLYVNGFTHQSSVSTTSTPGTSTVDLR|TSGTPSSLSPST
17 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLRPLFK|NTSVSLLYSGCR|LTLRPEK|DGAATR|VDAACTYRPDPK|SPGLDR|EQLYWELSQLTHNITELGPYTLDR|VSLYVNGFNPR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
18 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLKPLFK|NTSVGLLYSGCR|LASLRPEK|DSSAMAVDAICTHRPDPEDLGLDR|ER|LYWELSNLTNGIQELGPYTLDR|NSLYVNGFTHR|SSFLTSTPWTTSTVDLGTSGTPSPVPSPT
19 TAGPLLVPTLNFTITNLQYEEEDMHRPGSR|R|FNATTER|VLQGLLTPFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDTICTHR|VDPGPGGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFNWSSVPTTSTPGTSTVHLATSGTPSSLPGHT
20 APVPLIPFTLNFTITDLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|HGAATGVDAICTLR|LDPTGPGLDR|ER|LYWELSQLTNSVTELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPASLPGHT
21 APGPLLVPTLNFTITNLQYEEEDMR|HPGSR|K|FNATTER|VLQGLLKPLFK|NTSVSLLYSGCR|LTLRPEK|DGAATR|VDAVCTHRPDPK|SPGLDR|ER|LYWK|LSQLTHGITELGPYTLDR|HSLYVNGFTHQSSMTTTR|TPDTSTMHLATS|R|TPASLSGPT
22 TASPLLVFTINFTITNQR|YEENMHHPGSR|K|FNATTER|VLQGLLRPVFK|NTSVGPLYSGCR|LTLRPK|K|DGAATK|VDAICTYRPDPK|SPGLDR|EQLYWELSQLTHSITELGPYTOQR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPASLPGHT
23 APGPLLVPTLNFTITNLQYEEEDMR|HPSGR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|R|GAATGVDTICTHR|LDPLNPGLDR|EQLYWELSK|LYR|GHIELGPLYLDR|GSLYVNGFTHR|TSVPTTSTPGTSTVDLGTSGTPFSLPSPA
24 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQTLGPMFK|NTSVGLLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHWIPVPTSSSTPGTSTVDLGTSGTPSSLPSPT
25 TAGPLLVPTLNFTITNLK|YEEDMHCPSGR|K|FNATTER|VLQGLLGPMPK|NTSVGPLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWEK|SQLTNGIK|ELGPYTLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSPT
26 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLXPXFK|XTSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFTHWIPVPTSSSTPGTSTVDLGTSGTPSSLPSPT
27 TAGPLLVPTLNFTITNLK|YEEDMHCPSGR|K|FNATTER|VLQGLLGPMPK|NTSVGPLYSGCR|LTSR|SEK|DGAATGVDAICTHR|VDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSPT
28 SAGPLLVPTLNFTITNLQYEEEDMHHPGSR|K|FNATTER|VLQGLLGPMPK|NTSVGLLYSGCR|LTLRPEK|NGAATGMDAICTHR|LDPK|SPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
29 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLKPLFR|NSSLEYLYSGCR|LASLRPEK|DSSAMAVDAICTHRPDPEDLGLDR|ER|LYWELSNLTNGIQELGPYTLDR|NSLYVNGFTHR|SSMPTTSTPGTSTVDVGTSGTPSSSPST
30 TAGPLVIPFTLNFTITNLQYEGEDMGHPGSR|K|FNATTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTSR|SEK|DGAATGVDAICHHLDPK|SPGLNR|ER|LYWELSQLTNGIK|ELGPYTLDR|NSLYVNGFTHR|TSVPTTSTPGTSTVDLGTSGTPFSLPSPA
31 TAGPLLVFTLNFTITNLK|YEEDMHRPGSR|K|FNATTER|VLQTLGPMFK|NTSVGLLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
32 XXXPLVIPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLRPVFK|NTSVGPLYSGCR|LTLRPK|K|DGAATK|VDAICTYRPDPK|SPGLDR|EQLYWELSQLTHNITELGPYTOQR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
33 EPGLLIPFTLNFTITNLK|YEENMQHPGSR|K|FNATTER|VLQGLLTPFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDTICTHR|VDPGPGGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFNWSSVPTTSTPGTSTVHLATSGTPSSLPGHT
34 APVPLIPFTLNFTITDLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|HGAATGVDAICTLR|LDPTGPGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFNWSSVPTTSTPGTSTVHLATSGTPSSLPGHT
35 TAGPLLVPTLNFTITNLK|YEEDMHCPSGR|K|FNATTER|VLQSLHGPMFK|NTSVGPLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
36 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLXPXFK|XTSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSLTNSITELGPYTLDR|DSLYVNGFTHR|SSMPTTSTPGTSTVHLATSGTPASLPGHT
37 APGPLLVPTLNFTITNLQYEEEDMR|HPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|R|GAATGVDTICTHR|LDPLNPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
38 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLXPXFK|XTSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFHPR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
39 APVPLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLGPMPK|NTSVGLLYSGCR|LTLRPEK|NGAATGMDAICSHR|LDPK|SPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
40 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLXPXFK|XTSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFTHQNSVPTTSTPGTSTVYVWATTGTPSSFPGHT
41 EPGLLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLTPFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDTICTHR|VDPGPGGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
42 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLXPXFK|XTSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFTHR|SSVPTTSSPGTSTVHLATSGTPSSLPGHT
43 APVPLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|HGAATGVDAICTLR|LDPTGPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
44 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLXPXFK|XTSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFTHR|TSVPTTSTPGTSTVHLATSGTPSSLPGHT
45 APVPLIPFTLNFTITNLQYEEEDMHRPGSR|K|FNATTER|VLQGLLSPIFK|NSSVGPLYSGCR|LTSRPEK|DGAATGMDAVCLYHPNPK|RPGLDR|EQLYCELSQLTHNITELGPYSLDR|DSLYVNGFTHQNSVPTTSTPGTSTVYVWATTGTPSSFPGHT
46 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLXPXFK|XTSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFTHWSSGLTTSTPWTTSTVDLGTSGTPSPVPSPT
47 TAGPLLVPTLNFTITNLQYEEEDMHRPGSR|K|FNATER|VLQGLLSPIFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDTICTHR|VDPGPGGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
48 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLXPXFK|XTSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFTHR|SFGLTSTPWTTSTVDLGTSGTPSPVPSPT
49 TAGPLLVPTLNFTITNLQYEEEDMHRPGSR|K|FNATTER|VLQGLLTPFR|NTSVSLLYSGCR|LTLRPEK|DGAATR|VDAVCTHRPDPK|SPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
50 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLXPXFK|XTSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFTHWIPVPTSSSTPGTSTVDLGTSGTPSSLPSPT
51 TAGPLLVPTLNFTITNLQYEGEDMGHPGSR|K|FNATTER|VLQGLLGPFIK|NTSVGPLYSGCR|LTSR|SEK|DGAATGVDAICHHLDPK|SPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
52 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLXPXFK|XTSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFTHQTFAPNTSTPGTSTVDLGTSGTPSSLPSPT
53 SAGPLLVPTLNFTITNLQYEEEDMHHPGSR|K|FNATTER|VLQGLLGPMPK|NTSVGLLYSGCR|LTLRPEK|NGAATR|VDAVCTHRPDPK|SPGLDR|EXLYWELSLTXXIXELGPYXDR|XSLYVNGFXXXXXXXSTPGTSTVXLXTSGTPXXXPXT
54 APVPLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLRPLFK|STSVGPLYSGCR|LTLRPEK|HGAATGVDTICTLR|LDPTGPGLDR|ER|LYWELSQLTNSVTELGPYTLDR|DSLYVNGFTQR|SSVPTTSTPGTSTVHLATSGTPASLPGHT
55 APGPLLVPTLNFTITNLQYEEEDMR|HPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|R|GAATGVDTACTHR|LDPLNPGLDR|EQLYWELSK|LTR|GHIELGPLYLDR|GSLYVNGFTHR|NFVPTSTPGTSTVHLGTSETPSSLPRPI
56 VPGPLLVPTLNFTITNLQYEEAMR|HPGSR|K|FNATTER|VLQGLLRPLFK|NTSIGPLYSSCR|LTLRPEK|DK|AATR|VDAICTHHPDQSPGLNR|EQLYWELSQLTHGITELGPYTLDR|DSLYVDGFTHWSPIPTTSTPGTSTVNLGTSGIPPSLPETT
57 XXXPLXPFTLNFTITNLXYEEMXXXPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|DGAATR|VDAICTHRPDPK|IPGLDR|QQLYWELSQLTHSITELGPYTLDR|DSLYVNGFTQR|SSVPTTSTPGTFTVQPETSETPSSLPGPT
58 ATGPVLLPFTLNFTITNLQYEEEDMHRPGSR|K|FNATTER|VLQGLLMPFK|NTSVSLLYSGCR|LTLRPEK|DGAATR|VDAVCTHRPDPK|SPGLDR|ER|LYWK|LSQLTHGITELGPYTLDR|HSLYVNGFTHQSSMTTTR|TPDTSTMHLATS|R|TPASLSGPT
59 TASPLLVFTINFTITNLR|YEENMHHPGSR|K|FNATTER|VLQGLLRPVFK|NTSVGPLYSGCR|LTLRPK|K|DGAATK|VDAICTYRPDPK|SPGLDR|EQLYWELSQLTHSITELGPYTOQR|DSLYVNGFTQR|SSVPTTSTPGTPTVDLGTSGTPVSKPGPS
60 AASPLLVFTLNFTITNLR|YEENMQHPGSR|K|FNATTER|VLQGLLR|SLFLSTSVGPLYSGCR|LTLRPEK|DGTATGVDAICTHHPDPK|SPR|LDR|EQLYWELSQLTHNITELGHYALDNDLSLVNGFTHR|SSVSTTSTPGTPTVYLGASK|TPASIFGPS
61 AASHLLIFLTNFTITNLR|YEENMQHPGSR|K|FNATTER|VLQGLLRPLFK|NTSVGPLYSGSR|LTLRPEK|DGEATGVDAICTHRPDPGGLDR|EQLYLELSQLTHSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTGVVSEEPFTLNFTINNLR|YMA

Incomplete Repeats

62 DMGQPGSLK|FNITDNVMO|HLLSPLFQR|SSLGAR|YTGR|VIALR|SVK|NGAETR|VDLLCTYLQPLSGPLPK|QVFHELSSQTHGTR|LGPYSLDK|DSLYLNGYNEPGPDEPPTTPKATTFPLPSEATTAMGYHLK|TLTNFTISNLQYSP
63 DMGK|GSATFNSTEGVLQHLRPLFQK|SSMGPFYLGQCLISLRPEK|DGAATGVDTTCTYHPDPVPGGLDIQQLYWELSQLTHGVTQLGFYVLDLDR|DSLFINGYAPQNSLR|GEYQINFHIVNWNLSNPDPTSEY

C-terminus

ITLLR|DIQDK|VTTLK|GSQLHDTFR|FCLVTNLTMDSVLVTVK|ALFSSNLDPSLVEQVFLDK|TLNASFWLWGSTYQLVDIHVTEMESSYVQPTSSSTQHfYLNFTITNLPSYQDK|AQPGETTYNQY|NK|R|NIEDALNQLFR|NSSIK|SYFSDCQVSTFR|SVPNR|HHTGVDSLNCNFSPLAR|R|VDR|VAIYEEFLR|MTR|NGTQLQNFTLDR|SSVLVDGYSNPR|NEPLTGNSDLPFWAVILIGLAGLLGLITCLICGLVLTTR|R|R|K|K|EGEYVNVQQQCPGYQSHLDELDLQ

Patient 3

1 ATVPFMPVFTLNFTITNLQYEDDMR|HPGSR|K|FNATER|ELQGLLKPLFR|NSSLEYLYSGCR|LASLRPEK|DSSAMAVDAICTHRPDPEDLGLDR|ER|LYWELSNLTNGIQELGPYTLDR|NSLYVNGFTHR|SSMPTTSTPGTSTVDVGTSGTPSSSPST
2 AAGPLLMPFTLNFTITNLQYEDDMR|R|TGSR|K|FNTMESVLQGLLKPLFK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGLNR|EQLYWELSK|LTDNIEELGPYTLDR|NSLYVNGFTHQSSVSTTSTPGTSTVDLDR|TSGTPSSLSPTIM
3 AAGPLLVPFTLNFTITNLQYEDMGHPGSR|K|FNATTER|VLQGLLGPIFK|NTSVGPLYSGCR|LTSR|SEK|DGAATGVDAICHHLDPK|SPGLNR|ER|LYWELSQLTNGIK|ELGPTYLDR|NSLYVNGFTHR|TSVPTSTPGTSTVDLGTSGTPFSLPSP
4 TAGPLLVLFTLNFTITNLK|YEEDMHRPGR|K|FNATTER|VLQTLGPMFK|NTSVGLLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGLDR|EQLYWELSQLTNGIK|ELGPTYLDR|NSLYVNGFTHWIPVPTSTSTPGTSTVDLGTSGTPSSLPSP
5 AAGPLLVPFTLNFTITNLQYEDMHHHPGSR|K|FNATTER|VLQGLLGPMFK|NTSVGLLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPTYLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
6 SAGPLLVPFTLNFTITNLQYEDDMR|HPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPTYLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
7 SAGPLLVPFTLNFTITNLQYEDMHHHPGSR|K|FNATTER|VLQGLLGPMFK|NTSVGLLYSGCR|LTLR|PEDN|DGAATGVDAICSHR|LDPK|SPGLNR|EQLYWELSQLTHGIK|ELGPTYLDR|NSLYVNGFTHR|SSVAPTSTPGTSTVDLGTSGTPSSLPSP
8 TAVPLLVPFTLNFTITNLQYEDDMR|HPGSR|K|FNATTER|VLQGLLGPIFK|NTSVGPLYSGCR|LISLR|SEK|DGAATGVDAICTHHLNQPSPGLDR|EQLYWQLSQMNTNGIK|ELGPTYLDR|NSLYVNGFTHR|SSGLTTSTPWTSTVDLGTSGTPSPVPSPT
9 TAGPLLVPFTLNFTITNLQYEDMHRPGR|K|FNATER|VLQGLLPIFK|NTSVGPLYSGCR|LTSRPEK|DGAATGMDAVCLYHPNPK|RPGLDR|EQLYWELSQLTHNITELGPYSLDR|DSLYVNGFTHQNSVPTTSTPGTSTVYVWATTGTPSSFPGHT
10 EPGPLLIPFTNFITNLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|NTSVGPLYSGCR|LTSRPEK|DGAATGMDAVCLYHPNPK|RPGLDR|EQLYCELSQLTHNITELGPYSLDR|DSLYVNGFTHQNSVPTTSTPGTSTVYVWATTGTPSSFPGHT
11 EPGPLLIPFTNFITNLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|NTSVGPLYSGCR|LTLRPEK|HEAATGVDTICTHR|VDPGIGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFNPR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
12 APVLLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|NTSVGPLYSGCR|LTLRPEK|HEAATGVDTICTHR|VDPGIGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
13 SAGPLLVPFTLNFTITNLQYEDMHHHPGSR|K|FNATTER|VLQGLLGPMFK|NTSVGLLYSGCR|LTLRPEK|NGAATGMDAICSHR|LDPK|SPGLDR|EQLYWELSQLTHGIK|ELGPTYLDR|NSLYVNGFTHR|SSVAPTSTPGTSTVDLGTSGTPSSLPSP
14 TAVPLLVPFTLNFTITNLQYEDDMR|HPGSR|K|FNATTER|VLQGLLGPIFK|NTSVGPLYSGCR|LISLR|SEK|DGAATGVDAICTHHLNQPSPGLDR|EQLYWQLSQMNTNGIK|ELGPTYLDR|NSLYVNGFTHR|SSGLTTSTPWTSTVDLGTSGTPSPVPSPT
15 TAGPLLVPFTLNFTITNLQYEDMHRPGR|K|FNATER|VLQGLLPIFK|NTSVGPLYSGCR|LTSRPEK|DGAATGMDAVCLYHPNPK|RPGLDR|EQLYWELSQLTHNITELGPYSLDR|DSLYVNGFTHQSSMTTTR|TPDTSTMHLATSR|TPASLSGPT
16 TASPPLLVPFTLNFTITNLQYEDDMR|R|TGSR|K|FNTMESVLQGLLKPLFK|NTSVGPLYSGCR|LTLRPEK|DGAATGVDAICTHR|LDPK|SPGLNR|EQLYWELSK|LTDNIEELGPYTLDR|NSLYVNGFTHQSSVSTTSTPGTSTVDLDR|TSGTPSSLSPT
17 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLRPLFK|NTSVSSLYSGCR|LTLRPEK|DGAATR|VDAACTYRPDPK|SPGLDR|EQLYWELSQLTHSITELGPYTLDR|VSLYVNGFNPR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
18 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLKPLFR|NSSLEYLYSGCR|LASLRPEK|DSSAMAVDAICTHRPDPEDLGLDR|ER|LYWELSNLTNGIQELGPYTLDR|NSLYVNGFTHR|SSFLTSTPWTSTVDLGTSGTPSPVPSPT
19 TAGPLLVPFTLNFTITNLQYEDMHRPGR|R|FNATTER|VLQGLLPLFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDTICTHR|VDPGIGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFNWSSVPTTSTPGTSTVHLATSGTPSSLPGHT
20 APVLLIPFTLNFTITDLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|HGAATGVDAICTLR|LDPTGPGDR|ER|LYWELSQLTNSVTELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
21 APGPLLVPFTLNFTITNLQYEDDMR|HPGSR|K|FNATTER|VLQGLLKPLFK|NTSVSSLYSGCR|LTLRPEK|DGAATR|VDAVCTHRPDPK|SPGLDR|ER|LYWK|LSQLTHGITELGPYTLDR|HSLYVNGFTHQSSMTTTR|TPDTSTMHLATSR|TPASLSGPT
22 TASPPLLVPFTLNFTITNQR|YEENMHHHPGSR|K|FNATTER|VLQGLLRPVFK|NTSVGPLYSGCR|LTLRPEK|DGAATK|VDAICTYRPDPK|SPGLDR|EQLYWELSQLTHSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
23 APGPLLVPFTLNFTITNLQYEDDMR|HPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|R|GAATGVDTICTHR|LDPLNPLGDR|EQLYWELSK|LYR|GIELGPYLLDR|GSLYVNGFTHR|TSVPTTSTPGTSTVDLGTSGTPFSLPSPA
24 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQTLGPMFK|NTSVGLLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPTYLDR|NSLYVNGFTHWIPVPTSTSTPGTSTVDLGTSGTPSSLPSP
25 TAGPLLVPFTLNFTITNLK|YEEDMHCPGSR|K|FNATTER|VLQSLGPMFK|NTSVGPLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGVDR|EQLYWEK|SQLTNGIK|ELGPTYLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
26 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLXPXFK|XSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHWIPVPTSTSTPGTSTVDLGTSGTPSSLPSP
27 TAGPLLVPFTLNFTITNLK|YEEDMHCPGSR|K|FNATTER|VLQSLGPMFK|NTSVGPLYSGCR|LTSR|SEK|DGAATGVDAICTHR|VDPK|SPGVDR|EQLYWELSQLTNGIK|ELGPTYLDR|NSLYVNGFTHQTSAPNTSTPGTSTVDLGTSGTPSSLPSP
28 SAGPLLVPFTLNFTITNLQYEDMHHHPGSR|K|FNATTER|VLQGLLGPMFK|NTSVGLLYSGCR|LTLRPEK|NGAATGMDAICTHR|LDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
29 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLKPLFR|NSSLEYLYSGCR|LASLRPEK|DSSAMAVDAICTHRPDPEDLGLDR|ER|LYWELSNLTNGIQELGPYTLDR|NSLYVNGFTHR|SSMPTTSTPGTSTVDVGTSGTPSSSPST
30 TAGPLLVPFTLNFTITNLQYEDMGHPGSR|K|FNATTER|VLQGLLGPIFK|NTSVGPLYSGCR|LTSR|SEK|DGAATGVDAICHHLDPK|SPGLNR|ER|LYWELSQLTNGIK|ELGPTYLDR|NSLYVNGFTHR|TSVPTTSTPGTSTVDLGTSGTPFSLPSPA
31 TAGPLLVLFTLNFTITNLK|YEEDMHRPGR|K|FNATTER|VLQTLGPMFK|NTSVGLLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGLDR|EXLYWELSQLTNGIK|ELGPTYLDR|NSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
32 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLRPVFK|NTSVGPLYSGCR|LTLRPEK|DGAATK|VDAICTYRPDPK|SPGLDR|EQLYWELSQLTHSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
33 EPGPLLIPFTNFITNLHYEENMQHPGSR|K|FNATTER|VLQGLLPLFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDTICTHR|VDPGIGLDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFNWSSVPTTSTPGTSTVHLATSGTPSSLPGHT
34 APVLLIPFTLNFTITDLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|HGAATGVDAICTLR|LDPTGPGDR|ER|LYWELSQLTNSITELGPYTLDR|DSLYVNGFNWSSVPTTSTPGTSTVHLATSGTPSSLPGHT
35 TAGPLLVPFTLNFTITNLK|YEEDMHCPGSR|K|FNATTER|VLQSLGPMFK|NTSVGPLYSGCR|LTLR|SEK|DGAATGVDAICTHR|LDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
36 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLXPXFK|XSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|DSLYVNGFTHR|SSMPTTSTPGTSTVHLATSGTPSSLPGHT
37 APGPLLVPFTLNFTITNLQYEDDMR|HPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|R|GAATGVDTICTHR|LDPLNPLGDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
38 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLXPXFK|XSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFHPR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
39 APVLLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLGPMFK|NTSVGLLYSGCR|LTLRPEK|NGAATGMDAICSHR|LDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
40 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLXPXFK|XSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQNSVPTTSTPGTSTVYVWATTGTPSSFPGHT
41 EPGPLLIPFTNFITNLHYEENMQHPGSR|K|FNATTER|VLQGLLPLFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDTICTHR|VDPGIGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
42 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLXPXFK|XSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
43 APVLLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|HGAATGVDAICTLR|LDPTGPGDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
44 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLXPXFK|XSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHR|TSVPTTSTPGTSTVHLATSGTPSSLPGHT
45 APVLLIPFTLNFTITNLQYEDMHRPGR|K|FNATTER|VLQGLLPIFK|NTSVGPLYSGCR|LTSRPEK|DGAATGMDAVCLYHPNPK|RPGLDR|EQLYCELSQLTHNITELGPYSLDR|DSLYVNGFTHQNSVPTTSTPGTSTVYVWATTGTPSSFPGHT
46 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLXPXFK|XSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHWSSGLTTSTPWTSTVDLGTSGTPSPVPSPT
47 TAGPLLVPFTLNFTITNLQYEDMHRPGR|K|FNATER|VLQGLLPIFK|NTSVGPLYSGCR|LTLRPEK|QEAATGVDTICTHR|VDPGIGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
48 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLXPXFK|XSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHR|SGLTTSTPWTSTVDLGTSGTPSPVPSPT
49 TAGPLLVPFTLNFTITNLQYEDMHRPGR|K|FNATTER|VLQGLLPLFR|NTSVSSLYSGCR|LTLRPEK|DGAATR|VDAVCTHRPDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
50 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLXPXFK|XSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHWIPVPTSTSTPGTSTVDLGTSGTPSSLPSP
51 TAGPLLVPFTLNFTITNLQYEDMGHPGSR|K|FNATTER|VLQGLLGPIFK|NTSVGPLYSGCR|LTSR|SEK|DGAATGVDAICHHLDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
52 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLXPXFK|XSVGXLYSGCR|LTLR|XEK|XXAATXVDXXCXXXDPXXPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFTHQTFAPNTSTPGTSTVDLGTSGTPSSLPSP
53 SAGPLLVPFTLNFTITNLQYEDMHHHPGSR|K|FNATTER|VLQGLLGPMFK|NTSVGLLYSGCR|LTLRPEK|NGAATR|VDAVCTHRPDPK|SPGLDR|EXLYWELSQLTNSITELGPYTLDR|XSLYVNGFXXXXXXXTSTPGTSTVXLXTSGTPXXXPXT
54 APVLLIPFTLNFTITNLHYEENMQHPGSR|K|FNATTER|VLQGLLRPLFK|STSVGPLYSGCR|LTLRPEK|HGAATGVDTICTLR|LDPTGPGDR|ER|LYWELSQLTNSVTELGPYTLDR|DSLYVNGFTQR|SSVPTTSTPGTSTVHLATSGTPSSLPGHT
55 APGPLLVPFTLNFTITNLQYEDDMR|HPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|R|GAATGVDTACTHR|LDPLNPLGDR|EQLYWELSK|LTR|GIELGPYLLDR|GSLYVNGFTHR|NFVPTSTPGTSTVHLATSETPSSLPRI
56 VPGPLLVPFTLNFTITNLQYEEAMR|HPGSR|K|FNATTER|VLQGLLRPLFK|NTSIGLYSSCR|LTLRPEK|DK|AATR|VDAICTHHPDQSPGLNR|EQLYWELSQLTHGITELGPYTLDR|DSLYVNGFTHWSPITSTPGTSTVNLGTSGIPPSLPETT
57 XXXPLLPFTLNFTITNLXYEEMXXPGSR|K|FNATTER|VLQGLLKPLFK|STSVGPLYSGCR|LTLRPEK|DGVATR|VDAICTHRPDPK|IPGLDR|QQLYWELSQLTHSITELGPYTLDR|DSLYVNGFTQR|SSVPTTSTPGTSTVHLATSETPSSLPGPT
58 ATGPVLLPFTLNFTITNLQYEDMHRPGR|K|FNATTER|VLQGLLMPFK|NTSVSSLYSGCR|LTLRPEK|DGAATR|VDAVCTHRPDPK|SPGLDR|ER|LYWK|LSQLTHGITELGPYTLDR|HSLYVNGFTHQSSMTTTR|TPDTSTMHLATSR|TPASLSGPT
59 TASPPLLVPFTLNFTITNLR|YEENMHHHPGSR|K|FNATTER|VLQGLLRPVFK|NTSVGPLYSGCR|LTLRPEK|K|DGAATK|VDAICTYRPDPK|SPGLDR|EQLYWELSQLTHSITELGPYTLDR|DSLYVNGFTQR|SSVPTTSTPGTPTVDLGTSGTPVSKPGPS
60 AASPLLVLFTNGTITNLR|YEENMQHPGSR|K|FNATTER|VLQGLLR|SLFSTSVGPLYSGCR|LTLRPEK|DGTATGVDAICTHHPDPK|SPR|LDR|EQLYWELSQLTHNITELGHALDNDLDFVNGFTHR|SSVSTTSTPGTPTVYLGASK|TPASIFGPS
61 AASHLLIFLTNFITNLR|YEENMQWPGSR|K|FNATTER|VLQGLLRPLFK|NTSVGPLYSGSR|LTLRPEK|DGEATGVDAICTHRPDPGGLDR|EQLYLELSQLTHSITELGPYTLDR|DSLYVNGFTHR|SSVPTTSTGVVEEFTLNFTITNLR|YMA

Incomplete repeats

62 DMGQPGSLK|FNITDNVMQHLLSPLFQR|SSLGAR|YTGR|VIALR|SVK|NGAETR|VDLLCTYLQPLSGPLPIK|QVHELSSQTHGTR|LGPYSLDK|DSLYLNGYNPEGPDEPPTPKPATTFLPPLSEATTAMGYHLK|TLTNFTISNLQYSP

63 DMGK|GSATFNSTEGVLQHLRPLFQK|SSMGPFYLGCLISLRPEK|DGAATGVDTTCTYHPDPVPGPLDIQQLYWELSQLTHGVTQLGFVYVDR|DSLFINGYAPQNSLR|GEYQINFHIVNWNLSNPDPSTSEY

C-terminus

ITLLR|DIQDK|VTTYK|GSQLHDTFR|FCLVTNLTMDSVLVTVK|ALFSSNLDPSLVEQVFLDK|TLNASFHVLGSTYQLVDIHVTEMESSVYQPTSSSTQHFLYFNFTITNLPSYQDK|AQPGETTYNQR|NK|R|NIEDALNQLFR|NSSIK|SYFSDCQVSTFR|SVPNR|

HHTGVDSLNCNFSPLAR|R|VDR|VAIYEFLR|MTR|NGTQLQNFTLDR|SSVLVDGYSPNR|NEPLTGNSDLPFWAVILIGLAGLLGLITCLICGLVTVTR|R|R|K|KEGYNVQQQCPGYQSHLDLEDLQ