

1

B3-02
B3-523-21
B5-37-534
B1-032
B1-0807
REC-B3/B4
CV-B4-JVB
B4-07
B4-37-428
CV-B3-Nancy
B6-041
B2-37-222

VP4

70

VP2

MGAQVSTQKTGAHETGVNASGNSIIHYTNINYYKDAASNSATRQDFAQDPGKFTEPVKDIMIKSLPALN SPTVEECGYSDRVRISITLGNSTITTQEACANVVVGYGWPDYL KDEATAED
MGAQVSTQKTGAHETGVNASGNSIIHYTNINYYKDAASNSATRQDFAQDPGKFTEPVKDIMIKSLPALN SPTVEECGYSDRVRISITLGNSTITTQEACANVVVGYGWPDYL KDEATAED
-----MXKTGAHETGLNASGNSIIHYTNINYYKDAASNSANRQFEAQDPGKFTEPVKDIMIKSPALN SPSAECECGYSDRVRISITLGNSTITTQEACANVVVGYGWTPTYL KDEEATAED
MGAQVSTQKTGAHETGLNASGNSIIHYTNINYYKDAASNSANRQDFTQDPGKFTEPVKDIMIKSMPALN SPSAECECGYSDRVRISITLGNSTITTQEACANVVVGYGWPEYL KDNEATAED
MGAQVSTQKTGAHETGLNASGNSIIHYTNINYYKDAASNSANRQDFTQDPGKFTEPVKDIMIKSMPALN SPSAECECGYSDRVRISITLGNSTITTQEACANVVVGYGWPEYL KDNEATAED
MGAQVSTQKTGAHETGLNASGNSIIHYTNINYYKDAASNSANRQDFAQDPGKFTEPVKDIMIKSLPALN SPTVEECGYSDRVRISITLGNSTITTQEACANVVVGYGWPDYL KDEATAED
MGAQVSTQKTGAHETSLSASGNSIIHYTNINYYKDAASNSANRQDFTQDSPSKFTEPVKDVMIKSLPALN SPTVEECGYSDRVRISITLGNSTITTQEACANVVVGYGWPDYL SDEEATAED
MGAQVSTQKTGAHETNLASGNSIIHYTNINYYKDAASNSANRQDFAQDPGKFTEPVKDVMIKSLPALN SPTVEECGYSDRVRISITLGNSTITTQEACANVVVGYGWPDYL SDEEATAED
MGTQVSTQKTGAHETSLKASGNSIIHYTNINYYKDAASNSANRQDFTQDSPSKFTEPVKDVMIKSLPALN SPTVEECGYSDRVRISITLGNSTITTQEACANVVVGYGWPDYL SDEEATAED
MGAQVSTQKTGAHETRLNASGNSIIHYTNINYYKDAASNSANRQDFTQDPGKFTEPVKDIMIKSLPALN SPTVEECGYSDRARSITLGNSTITTQEACANVVVGYGWPDYL KDESEATAED
MGAQVSTQKTGAHETALNAQGNSVIHYTNINYYKDAASNSANRQDFTQDSPSKFTEPVKDVMIKSLPALN SPTVEECGYSDRVRISITLGNSTITTQEACANVVAYGWPDYL HDDEATAED
MGAQVSTQKTGAHETGLSASGSGSIHYTNINYYKDAASNSANRQDFTQDPGKFTEPVKDIMIKSMPALN SPSAECECGYSDRVRISITLGNSTITTQEACANVVVGYGWTPTYL SKDEATAED

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121

B3-02
B3-523-21
B5-37-534
B1-032
B1-0807
REC-B3/B4
CV-B4-JVB
B4-07-final
B4-37-428
CV-B3-Nancy
B6-041
B2-37-222

EF loop (PUF) ← site 2b ↓

QPTQPDVATCRFYTLDSVQWQKTS PGWwWKL PDALSNLGLFGQNMQYHYLGRGTGYTIHVQCNA SKFHQGC LLVVCVPEAEMGCATLDNTPSSEELLGGDAAKEFADKP - VASGSNKL VQR
QPTQPDVATCRFYTLDSVQWQKTS PGWwWKL PDALSNLGLFGQNMQYHYLGRGTGYTIHVQCNA SKFHQGC LLVVCVPEAEMGCATLDNTPSSEELLGGDAAKEFADKP - VASGSNKL VQR
QPTQPDVATCRFYTLDSVMWQSSPGWwWKF PDALSNMGLFGQNMQYHYLGRAGYTVHVQCNA SKFHQGC LLVVCVPEAEMGCATLANKPDQKSLNGETANTFDSQN - TTGQT - - AVQA
QPTQPDVATCRFYTLDSVQW MKNSAGWwWKL PDALSNMGLFGQNMQYHYLGRGTGYTIHVQCNA SKFHQGC LLVVCVPEAEMGCNSLNNTPFEAELSGGDNARMFDTTE - VGTSNNKKVQT
QPTQPDVATCRFYTLDSVQW MKNSAGWwWKL PDALSNMGLFGQNMQYHYLGRGTGYTIHVQCNA SRFHQGC LLVVCVPEAEMGCNSLNNTPFEAELSGGDAKVFDTTE - VGESNAKKVQT
QPTQPDVATCRFYTLDSVQWQKTS PGWwWKL PDALSNLGLFGQNMQYHYLGRGTGYTIHVQCNA SKFHQGC LLVVCVPEAEMGCATLDNTPSSEELLGGDAAKEFADKP - VASGSNKL VQR
QPTQPDVATCRFYTLDSVKWEMQSAGWwWKF PDALSEMGLFGQNMQYHYLGRSGYTIHVQCNA SKFHQGC LLVVCVPEAEMGCTNAENAPAYGDL CGGETAKSFEQN - - AATG - KTAVQT
QPTQPDVATCRFYTLDSVKWEMQSAGWwWKF PDALSEMGLFGQNMQYHYLGRSGYTIHVQCNA SKFHQGC LLVVCVPEAEMGCTNAENAPTYGDL CGGETAKQFEQN - - AATG - ETAVQT
QPTQPDVATCRFYTLDSVKWEMQSAGWwWKF PDALSEMGLFGQNMQYHYLGRSGYTIHVQCNA SKFHQGC LLVVCVPEAEMGCTNAENAPTYDDL CGGETAKQFEQN - - ATG - KTAVQT
QPTQPDVATCRFYTLDSVQWQKTS PGWwWKL PDALSNLGLFGQNMQYHYLGRGTGYTVHVQCNA SKFHQGC LLVVCVPEAEMGCATLDNTPSSAELLGGDAAKEFADKP - VASGSNKL VQR
QPTQPDVATCRFYTLDSVSWQSSSAGWwWKF PDALSNMGLFGQNMQYHYLGRSGYTIHVQCNA SKFHQGC LLVVCVPEAEMGCNSLNNAPLAADLSAGEVARQFTVEP - ANGQN - - QVQX
QPTQPDVATCRFYTLDSVQWQRESAGWwWKF PDALSDMGLFAQNM MYHYLGRGTGYTIHVQCNA SKFHQGC LLVVCVPEAEMGCTNKENTPLFENLCGGDNAKEFTREGPTISKGATDVQT

242

B3-02
B3-523-21
B5-37-534
B1-032
B1-0807
REC-B3/B4
CV-B4-JVB
B4-07
B4-37-428
CV-B3-Nancy
B6-041
B2-37-222


NP3
330

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VYVYAGMGIGVGX-----XLTIMPYTNSVPMDNMFHKNVTLMVIPFVPLDYCPGSTTYVPITVTIAPMCTEYNGLRLAGHGGLPTMNTPGSCQFLTSDDFQSPSAMPQ
VYVYAGMGIGVGX-----XATIVPYTNSVPMDNMFRHKNVTLMVIPFVPLDYCPGSTTYVPITVTIAPMCAEYNGLRLAGHGLPTMNTPGSCQFLTSDDFQSPSAMPQ
NVINAGMGVGVGNITIX-----IVMPYINSVPVDNMFRHNICTLMIIPFAPRSYSTGATTYVPITVTIAPMCAEYNGLRLAGKGLPTMLTPGSNQFLTSDDFQSPSAMPQ
AVWNAGMGVGVGNLTIXWI---NLRTNNSATIVMPYINSVPMDNMYRHNNLTLMIIPFVPLDYSGSSPYVPITVTIAPMCAEYNGLRLASSGLPVMVTPGSTQFLTSDDFQSPSAMPQ
AVWNAGMGVGVGNLTIFX-----IVMPYINSVPMDNMFRHNITLMIIPFVPLNYSEGSSPYVPITVTIAPMCAEYNGLRLASNGGLPVMVTPGSTQFLTSDDFQSPSAMPQ
VYVYAGMGIGVGNLTIFPHQWINLRTNNSATIVMPYINSVPMDNMFRHNNTLMVIPFVPLDYCPGSTTYVPITVTIAPMCAEYNGLRLAGHGLPTMNTPGSCQFLTSDDFQSPSAMPQ
AVCNAGMGVGVGNLTIFPHQWINLRTNNSATIVMPYINSVPMDNMFRHNNTLMIIPFAPLDYVTGASSYIPITVTIAPMSAEYNGLRLAGHGLPTMLTPGSTQFLTSDDFQSPSAMPQ
AVCNAGMGVGVGNLTIIYX-----RTNNSATIVMPYINSVPMDNMFRHNNTLMIIPFAPLDYVAGASSYIPITVTIAPMSAEYNGLRLAGHGLPTMLTPGSTQFLTSDDFQSPSAMPQ
AVCNAGMGVGVG-----XVMPYINSVPMDNMYRHNNFTLMIIPFAPLDYCPGSTTYVPITVTIAPMCAEYNGLRLAGHGLPTMNTPGSCQFLTSDDFQSPSAMPQ
VYVYAGMGVGVGNLTIFPHQWINLRTNNSATIVMPYINSVPMDNMFRHNNTLMVIPFVPLDYVTGASSYIPITVTIAPMSAEYNGLRLAGHGLPTMLTPGSTQFLTSDDFQSPSAMPQ
-----XTNNSAT-----IVMPYINSVPMDNMFRHNNTLMIIPFAPLDYSGASTFVPITVTIAPMNAEYNGLRLAGHGLPVMVTPGSTQFLTSDDFQSPCAMPQ
AVCNAGMGVXXAT-----IVMPYINSVPMDSMIRHNNTLMIIPFVPLDYVNGSSPYIPITVTIAPMSAEYNGLRLASTGLPTMLTPGSNQFLTSDDFQSPSAMPQ
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site 2a ↓

726

B3-02
B3-523-21
B5-37-534
B1-032
B1-0807
REC-B3/B4
CV-B4-JVB
B4-07
B4-37-428
CV-B3-Nancy
B6-041
B2-37-222

PGGPVPDKVDSYVWQTSTNPSVFWTEGNAPPRMSIPFLSIGNAYSNFYDGWSEFARSGVYGINTLNNMGTL YARHVNAGSTGPIKSTIRIYFKPKHV KAWIPRPPRLCQYEKAKNVNFQP
PGGPVPDKVDSYVWQTSTNPSVFWTEGNAPPRMSIPFLSIGNAYSNFYDGWSEFARSGVYGINTLNNMGTL YARHVNAGSTGPIKSTIRIYFKPKHV KAWIPRPPRLCQYEKAKNVNFQP
PGGPVPTKINSYVWQTSTNPSVFWTEGSAPPRISIPFISIGNAYSNFYDGWARFDKQGTYGINTLNNMGTL YMRHVNDGSPGPIVSTVRIYFKPKHV KTWVPRPPRLCQYQKAGNVNFEP
PGGPVPTKVTDYAWQTSTNPSVFWTEGNAPPRMSIPFISIGNAYSNFYDGWTFQSRNGVYGINTLNNMGTL YVRHVNEAGQGPIKSTVRIYFKPKHV TAWVPRPPRLCQYEKQKNVNFNP
PGGPVPTKVTDYAWQTSTNPSVFWTEGNAPPRMSIPFISIGNAYSNFYDGWTFQSRNGVYGINTLNNMGTL YMRHVNEAGQGPIKSTVRIYFKPKHV KAWVPRPPRLCQYEKQKNVNFNP
PGGPVPTSVNDYVWQTSTNPSIFWTEGNAPPRMSIPFMSIGNAYTMFYDGSNFSRDGIYGYNSLNNMGTI YARHVNDSPPGGLTSTIRIYFKPKHV KAYVPRPPRLCQYKAKNVNFDV
PGGPVPTSVNDYVWQTSTNPSIFWTEGNAPPRMSIPFMSIGNAYTMFYDGSNFSRDGIYGYNSLNNMGTI YARHVNDSPPGGLTSTIRIYFKPKHV KAYVPRPPRLCQYKAKNVNFDV
PGGPVPTSVNDYVWQTSTNPSIFWTEGDAPPRMSIPFMSIGNAYTMFYDGSNFSRDGIYGYNSLNNMGTI YARHVNDSPPGGLTSTIRIYFKPKHV KAYVPRPPRLCQYKAKNVNFDV
PGGPIPTSVHDYVWQTSTNPSIFWTEGNAPPRMSIPFMSIGNAYTMFYDGSNFSRDGIYGYNSLNNMGTI YARHVNDSPPGGLTSTIRIYFKPKHV KAYVPRPPRLCQYKAKNVNFDV
PGGPVPDKVDSYVWQTSTNPSVFWTEGNAPPRMSIPFLSIGNAYSNFYDGWSEFARSGVYGINTLNNMGTL YARHVNAGSTGPIKSTIRIYFKPKHV KAWIPRPPRLCQYEKAKNVNFQP
PGGPVPTKVDDYAWQTSTNPSVFWTEGNAPPRMSVPFMSIGNAYSTFYDGSNFSNKGIYGLNTLNNMGTL YIRHVNGPNPITSTVRIYFKPKHV KAWVPRPPRLCQYKTSRQVNFQTV
PGGPVPETVDDYNWQTSTNPSLFWTEGNAPPRMSIPFMSIGNAYSNFYDGWSEFRHDGVYGLNTLNNMGTI YARHVNADNPGSITSTVRIYFKPKHV KAWIPRPPRLAQYLKANNVNFKI
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847

B3-02
B3-523-21
B5-37-534
B1-032
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B4-07-final
B4-37-428
CV-B3-Nancy
B6-041
B2-37-222

SGVTTTRQSITAMTNT
SGVTTTRQSITAMTNT
TGVTESRTEITAMQTT
TGVTTTRSNIITTT---
TGVTTSLRDITTT---
EAVTTERANLVTT---
EAVTAERASLITT---
EAVTTERANLVTT---
EAVTTKRASLITT---
SGVTTTRQSITMTNT
TGVTESRANITMTNT
TNVTEKRDSLTTT---
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