

Number of sequences: 36
Alignment assumed to be: Protein
New number of positions: 202

	10	20	30	40	50	60
	=====+	=====+	=====+	=====+	=====+	=====+
P_arsenaticum	-----	-----	-----	-----	-----	-----
P_aerophilum	-----	-----	MKCPSREVF	SKFEESTNP	QWGKPPSQR	STEEYIKYSL
P_calidifontis	-----	-----	MKCGSREVF	VKLEEGTNP	QWGKPPSSR	SAEEHIRYSF
T_tenax	-----	-----	-----	-----	-----	-----
V_souniana	-----	-----	-----	-----	-----	-----
T_modestius	-----	-----	-----	-----	-----	-----
K_cryptofilum	-----	-----	MIDEVEEI	IAVKSAYEP	GPYGYR	PQERPIFLYLDHGL
N_equitans	MLCLSLMRIF	CSKCLEEQE	CLPLPWELE	KYEIWV	KKEAETNE	KWGEDPYNRPIERLLKYSV
M_kandleri	-----	MSGDKDRRLP	-----	FDRDREMIT	KAEVETDPRY	GCPPEERPIEEYIMKGV
M_janaschii	-----	MILLEKTQE	KKIN-----	DKEELIVKEE	VETNWDYGCN	PYERKIEDLIKYGV
Thermofilum	-----	-----	-----	-----	-----	-----
S_hellenicus	-----	-----	-----	-----	-----	-----
D_mucosus	-----	-----	-----	-----	-----	-----
D_amylolyticus	-----	-----	-----	-----	-----	-----
T_aggregans	-----	-----	-----	-----	-----	-----
I_pacificus	-----	-----	-----	-----	-----	-----
I_islandicus	-----	-----	-----	-----	-----	-----
I_hospitalis	-----	VKEALEWYE	EMHRKCD	FRGKWVIRE	EAEATDPKY	GKEPWKRDKELVELGV
A_aceticus	-----	-----	-----	-----	-----	-----
C_lagunuensis	-----	-----	-----	-----	-----	-----
A_pernix	--MAEEAVD	ARGEGARF	IEKVKSIC	GNTSRILY	KYDEPTDPRY	GYPHERPLDVYLYRGM
S_hydrogenophil	-----	-----	-----	-----	-----	-----
T_maritimus	-----	-----	-----	-----	-----	-----
P_abyssi	-----	-----	-----	-----	-----	-----
H_butylicus	-----	-----	-----	-----	-----	-----
P_fumarii	-----	-----	-----	-----	-----	-----
A_ambivalens	-----	-----	-----	-----	-----	-----
A_brierleyi	-----	-----	-----	-----	-----	-----
S_tokodaii	-----	MEIYDFIY	KIDSFCNYS	NNWNIIQD	SYTNEKYGY	FADKRPIEVLKNSI
S_acidocaldarii	-----	-----	-----	-----	-----	-----
S_solfataricus	-----	MILNDFIY	KIDNFCGY	KNEWKIRK	DSETSDKYGY	YPEKRPIEIIHNSI
M_haknonensis	-----	-----	-----	-----	-----	-----
S_metallicus	-----	-----	-----	-----	-----	-----
I_aggregans	-----	-----	-----	-----	-----	-----
N_maritimus	-----	-----	MTLKQLEN	LIEVDQDIT	DDAYGTYDY	KRTIEQLLNYGI
C_symbiosum	-----	-----	LTLAQLSGL	RVIDQDVT	DDAHGTYHDK	RSVEQLLEYGI

	70	80	90	100	110	120
	=====+	=====+	=====+	=====+	=====+	=====+
P_arsenaticum	-----VAAWWKKILG-	VERAGHAGTLDPKVSGVLPIA	VAEGTKVLMALSRSD			
P_aerophilum	VILDKPRGPSSHEVAAWWKKILG-	VERAGHAGTLDPKVSGVLPIA	IAEAGTKVLMALSRSD			
P_calidifontis	LILDKPRGPTSHEVAAWWKKILG-	VERAGHSGTLDPKVSGVLPVA	AVAEGTKVLMALSRAD			
T_tenax	-----VAWLKRILN-	VEVAGHSGTLDPNVSGVLPVA	IAEGTKALMALSRAD			
V_souniana	-----AAWIKKMLN-	LDRAGHSGTLDPRVSGVLPIAL	GESTKAMPAINNL			
T_modestius	-----VSWIKKMMG-	LERAGHAGTLDPRVSGVLPVAL	GDSTKVLGQISHED			
K_cryptofilum	IILDKPKGPPSSHEVTERVKRILEY	PGKVGHCGLDPKVS	GVLPIVLGNATKLSKFISGYD			
N_equitans	INLDKPSPGTSHQVVAWRDIVG-V-	KAGHGGTLDPKVTGVLPIA	IGEATKVLQTLLIAG			
M_kandleri	INLDKPAGPTSHEVVAWKEIFG-	LSKAGHGGTLDPKVTGVLPIA	EKATKIIQTLLPAG			
M_janaschii	VVDKPRGPTSHEVSTWVKKILN-	LDKAGHGGTLDPKVTGVL	PVALERATKTIPMWHIPP			
Thermofilum	-----VVAWLRKLLG-	IERIAHAGTLDPKVSGVLPITL	NNAVRVLPVLLKED			
S_hellenicus	-----VAWIKKMFE-	LERAGHGGTLDPKVTGVL	PVALANATKVIIGNVIHTI			
D_mucosus	-----VAWVKKMFG-	VEKAGHGGTLDPKVTGVL	PVGLANSTKVIIGNVIHSV			
D_amylolyticus	-----VAWVKKMFN-	LEKAGHGGTLDPKVTGVL	PIGLANSTKVIIGNVIHSV			
T_aggregans	-----VAWVKKLFN-	IDKAGHGGTLDPKVTGVL	PVGLDNSTKVIIGNVVHSV			
I_pacificus	-----VAWIKKMFN-	LEKAGHGGTLDPKVTGVL	PVALAEATKVIHYVMLSG			
I_islandicus	-----VAWIKRMFN-	LDKAGHGGTLDPKVTGVL	PVAFKEATKVIHYVMLSG			
I_hospitalis	VNLDKPPGPTSHEVVAWIKRMFG-	LERAGHGGTLDPKVTGVL	PVALAEATKVIHYVMLSG			
A_aceticus	-----TAWVKRLLG-	VKRAGHGGTLDPKVTGVL	PVALDHMTKIMGSVVHSR			
C_lagunuensis	-----VAWIKRLLN-	VDKAGHAGTLDPRVSGVLPVT	LGHMTKIIGYITHSN			
A_pernix	IVVDKPPGPTSHEVVAWIKRMLG-	VSRAGHGGTLDPKVTGVL	PVALERMTRIIGTMHSS			
S_hydrogenophil	-----VAWVKRMFN-	VPRAGHGGTLDPRVTGVL	PVALHRMTRVVGSVVHSS			
T_maritimus	-----VAWIKRMFN-	IKRAGHGGTLDPKVTGVL	PVALQRMTRIVGSVIHSD			
P_abyssi	-----VAWVKRMFG-	LSKAGHGGTLDPKVTGVL	PVALEEATKVI GLVVHTG			
H_butylicus	-----VAWIKRMFG-	LSKAGHGGTLDPKVTGVL	PVALEEATKVI GLVVHTG			
P_fumarii	-----VAWIKRMFG-	LSKAGHGGTLDPKVTGVL	PVALEEATKIIGMVVHTP			
A_ambivalens	-----AFWIKKMFN-	LSKVGHGGTLDPKVSGVLP	IGLENATKLMTYITKAG			
A_brierleyi	-----AFWVKKMFN-	INKVGHGGTLDPKVTGVL	PIGLENATKIMNYVTEAG			
S_tokodaii	INADKPPGPTSHEVAYWIKQMFK-	VSKAGHGGTLDPKVTGVL	PIGLENATKLMSYISSSG			
S_acidocaldarii	-----AYWVKKLFN-	ITKAGHGGTLDPKVTGVL	PIGLENATKL MN YISKSG			
S_solfatarius	INLDKPPGPTSHEVAYWVKKMLN-	VTKAGHGGTLDPKVTGVL	PIGIENATKIMNYISKGG			
M_haknonensis	-----AFWVKTMFG-	LPRVGHGGTLDPKVTGVL	PIGLKATRVMNLITKSG			
S_metallicus	-----AFWIKQRSL-	LNRVGHGGTLDPKVTGVL	PVGLDNATKIMHYVSRST			
I_aggregans	-----VAWIKKMFN-	IPKAGHGGTLDPKVTGVL	PVALDRATRIVIGILMHSY			
N_maritimus	IILDKPPGPTSSETVAWTKRIK-	LPKIGHSGTLDPVSGVLP	PLGLGEATKALGVLLFGP			
C_symbiosum	VLLDKPPGPTSHEAVAWAKRILE-	IPKAGHSGTLDPVSGVLP	PLGLGEATKALGVLLIGP			

	130	140	150	160	170	180
P_arsenaticum	=====+=====+=====+=====+=====+=====+					
P_aerophilum	KVYVAVAKFHGDVDEERLRAVLREFQGEIYQKPPLRSAVKRQLRTRRVFSLELLELEG--					
P_calidifontis	KVYVAVAKFHGDVDEDKLRVLQEFQGVYIYQKPPLRSAVKRQLRTRRVYSLDLELDG--					
T_tenax	KVYIYAVAKFHGDVDENLRRVLQELQGEIYQKPPLRSAVKRQLRTRRVYSLELLELDG--					
V_souniana	KEYIMVMKLHGDVDDGKLRAVLREFTGAIYQRPPLRSAVKRQLRVKHVYELELLERD--					
T_modestius	KEYIAVMTLHGDASDERIREVLAEFTGEIYQRPVKSARKRQLRTRRVYSLKMLERD--					
K_cryptofilum	KEYVGTLYLHGDVPIDELKGALDKFTGPIFQRPVKSARKRSLRVRRVYSIELLSSEG--					
N_equitans	KEYVALMHLHKEVSEKDIKVMSEKFGVTIITPPLRSAVKRRPRKKKVYCIKIIIDG--					
M_kandleri	KEYVTIMHLHGDVDEEELERVVKEFEGTILQRPPLRSAVKRRVRPKKIYYIDILEIDG--					
M_janaschii	KEYVCLMHLHRDASEEDILRVFKEFTGRIYQRPPLKAAVKRRRLIRKIHELELLDKDG--					
Thermofilum	KEYVCVMRLHGDVDPERLERVVSMFKGRIYQRPPLRSAVKREVRIRQIYDIRLLEFNE--					
S_hellenicus	KEYVMVIQLHAPVDNDRLRKVLKYFTGVYIYQRPPLRSSVKRVIRTRRIHYIDLLEHS--D					
D_mucosus	KEYVMVIQLHGDVAEQDLRRVAGYFRGEIYQRPPLRSSVKRAIRVRRRIHEIEVLEVR--G					
D_amycolyticus	KEYVMVIQLHGDARESSVKMVEYFKGDIYQKPPLRSSVKRSIRVRRRIYEIEELLEIR--D					
T_aggregans	KEYVMVIQLHGDVEIGKLVEALKYFTGEIYQRPPLRSSVKRVLRTRRIHEIEELDFK--D					
I_pacificus	KEYVMVIQLHGDVAVEQDVLENLKYLVGEIYQRPPLRSSVKRQLRTKKVYIHLIEFYPER					
I_islandicus	KEYVMVIQLHGDVAFNEKDVLENLKYLVGEIYQRPPLRSSVKRQLRTKKVYIHLIEFYPER					
I_hospitalis	KEYVMVIQLHGDVAVEEEVLENLKYLVGEIYQRPPLRSSVKRQLRTKKVYIHLVLEFWPER					
A_aceticus	KAYVCVMQLHGDVSEKKLREVAEEFTGTIYQRPVRSNVKRALRTRRIFSLEVLEVRG--					
C_lagunuensis	KTYVCVMQLHKDQVDELKRVINDFIGTIYQKPPIRSHVKRTLRTKIFNITINEIVD--					
A_pernix	KEYVCVMQLHRPVEEDRLREVLKLFEGEYQKPPLRSSVKRALRTRRVFRIELLETYG--					
S_hydrogenophil	KEYVCVMQLHRPVEEERLREALRLFEGRIYQRPPLRSSVKRSLRVKRVDEIELELDYD--					
T_maritimus	KEYVCVMQLHAPVEEERLREVLNEFEGVIYQRPPLRSSVKRALRKKRVYKIELLEYTG--					
P_abyssi	KEYTCVMQLHHPVPEQDLRRALFMFVGEIYQRPPLRSSVKRSLRTKKIYEIELELYNG--					
H_butylus	KEYMCMQLHRPVPVEELRRAINMFVGEIYQRPPLRSSVKRSLRLKKIYEIELELYNG--					
P_fumarii	KEYICVMQLHEPVVEEKKLLEAIKVFSTIYQRPPLRSSVKRSLRTKTIYEIELELYTG--					
A_ambivalens	KEYICVMETHEKVDLSIVKKIAEEFKGTIYQRPVRSVSKRRRLRTRKVFIDIEVLEKDD--					
A_brierleyi	KEYICVMQVHCDIEKDLLKSIIEKFKGKIYQRPVRSVSKRRRLRFRVNEIELELYTN--					
S_tokodaii	KEYVCLMQVHCDNFIDELKQIISKFIGIYQKPPVRSVSKRRRLRTRKKIYDIEILDIDTK--					
S_acidocaldarii	KEYICLLQMHCNVDQKELKEIISQFVGEIYQKPPVRSVSKRRIRKRRRIYAIIDIDMDQ--					
S_solfataricus	KEYVCVMQVHCEYNKEELAKIISSEFKGEIYQRPVRSVSKRRRLRIRRIYDIEILDMDK--					
M_haknonensis	KEYICLMEVHCEFSSEKDLREVSKQFVGTIYQKPPVRSVSKRRVRKREIYSLDLEISG--					
S_metallicus	KEYVCVMQVHSDFEKESLKSWMKFKGIYQRPVRSVSRKLRTKRIYDIEVTEIED--					
I_aggregans	KEYVGMELHGDVEPEKVIETMKMFVGKIYQRPPLRSSVKRSLRIRIYSIDVLEIEN--					
N_maritimus	KEYHALGRVHSLPSKEKLHEVIESLTGEIYQKPPQRSVVRQTRTRTIYEFVLEQKE--					
C_symbiosum	KEYVAVGRFHALQDSEKLGELARLFTGPIHQKPPQRSSVLRRTVKTIEIEVLEQKE--					
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	190	200	210	220	230	240
	=====+	=====+	=====+	=====+	=====+	=====+
P_arsenaticum	-RYAVIKMHVEAGTYARKIIHDIGEV	LGVGANMRELRRVAVTCFTED-E	-AVTLQDVADA			
P_aerophilum	-RYAVIKMHVEAGTYARKIIHDIGEV	LGVGANMRELRRVAVSCYTED-E	-AVTLQDIADA			
P_calidifontis	-RYAVIKMHVEAGTYARKIIHDIGEV	LGVGANMRELRRVAVSCFTED-E	-AVTLQDLADA			
T_tenax	-RYALLRMHVEAGTYARKLIHDIGEV	LGVSANMRELRRVVGCFTEE-E	-AFTLQDIADA			
V_souniana	-KYALIRMNVESGTYARKLAYDIGEV	LGVGANMRELRRIRVGCFTEK-E	-AITLQDLKDA			
T_modestius	-RYVLLDARVEAGTYIRKLCYDVGEV	LGVGANMRELRRVRVGCFGED-E	-AVTLHDLADA			
K_cryptofilum	-RFHKLRRVRESGTYIRKLFFDIGEFL	GVGGSMRDLRRIRSGIFTEK-D	-CVTLEDIKDA			
N_equitans	-KDVLFVRVSTQGGVYIRKLIHDIGV	KLGVGAHMQLRRKSGPFHEN-N	-SVYLQDIVDS			
M_kandleri	-RDVLMRVGCQAGTYIRKLCHDIGEAL	GVGAHMAELRRTRTGPFFSEE-N	-AVTLHDVKDA			
M_janaschii	-KDVLFVRVKCQSGTYIRKLCEDIGEAL	GTSAHMQLRRTKSGCFEEK-D	-AVYLQDLLDA			
Thermofilum	-RTALLHWCEAGTYMRKLCHDIGEIL	GVGAHMQLRRIRSGSLYEDRN-C	-STMHDVVDA			
S_hellenicus	-RYVLRVVGCEAGTYMRKLAHDIGLL	LGVGAHMRELRRTRTGPYKEDET-L	-VRMQEVSEA			
D_mucosus	-RFALIRVLSDPGTYMRKLAHDIGLL	LGVGAHMRELRRTRTGPYREDET-L	-VRLQDVSEA			
D_amyololyticus	-RFILVRVLSDPGTYMRKLAHDIGLM	LGTGAHMRELRRTRTGPYREDET-L	-VRLQDISEA			
T_aggregans	-RFALVRASCDPGTYMRKLAHDIGLY	TGVGAHMRELRRTRTGPYREDET-L	-VKLQDVSEA			
I_pacificus	-RMALVRVGSESGTYMRKIAHDLGLL	LGTGAHMRELRRTRSGPFHEEYN-L	-VRMQELSEA			
I_islandicus	-RMVMVRVGSESGTYMRKIAHDLGLL	MGGAHMRELRRTRSGPFHEGYN-L	-VTMQELSEA			
I_hospitalis	-RMALVRVGSESGTYMRKLAHDLGLL	VGTGAHMRELRRTRSGPFHEDWN-L	-VRMQDLSEA			
A_aceticus	-RLALLRVESDPGTYMRKLCWDMLVL	GVGAHMRELRRIKTGPFFEDHN-L	-VTLQELSEA			
C_lagunuensis	-RKVLLTIESEAGTYMRKLCWDIGLIL	GGGAHMRELRRIKTGPFFEDYY-L	-VTMQDLTEA			
A_pernix	-KYALLRVDCEAGTYMRKLCWDIGLV	LGVGAHMRELRRIRTGPFFSEDSGL	-MVRLLDDVAYA			
S_hydrogenophil	ERYALLRIACEAGTYMRKICWDVGLV	LGVGAHMRELRRTRTGPFFSEARG-L	-VTLQEVSEA			
T_maritimus	-KYALLHIWSEAGTYMRKICWDVGLV	LGTGAHMRELRRIRTGPFFTEERG-L	-VRMQDIAYA			
P_abyssi	-RYALMRVFCEAGTYMRKLCHDVGLIL	GVGAHMRELRRTKSGPFREQHG-L	-VRLQDLSEA			
H_butylus	-RYALMRVFSEAGTYMRKLCHDIGLIL	GVGAHMRELRRTRSGPFREERNG-L	-VRLQELSEA			
P_fumarii	-RYALMRVLCDPGTYMRKLCHDIGLYL	GVGAHMRELRRTKSGPFREAYG-L	-VKLQDLSEA			
A_ambivalens	-KLFLLRISSEPGTYMRKICHDMGII	LGTGAHMRELRRIRSGIFTES-G	-LFTLQEVSEA			
A_brierleyi	-RMALLRISSEPGTYMRKICHDAGILL	GCGAHMRELRRIRSGIFTEK-N	-LVTLQEVSEA			
S_tokodaii	-RFILLRISSDPGTYMRKLCHDIGVIL	GCGAHMRELRRIRSGIFTEK-N	-LVTLQEISEA			
S_acidocaldarii	-KLILLRVQSDAGTYMRKLCHDVGV	IAGCGSHMRELRRIRSGIFTEKTN-M	-VTLQEVSES			
S_solfataricus	-KLVLLRVNCDSGTYMRKLCHDIGI	IYGCGAHMRELRRTRSGIFTESN-L	-VKLHELSEA			
M_haknonensis	-RRVLMRISSEPGTYMRKICHDMGII	LGTGAHMRELRRTKSGIFKED-T	-LVTLQQVSEA			
S_metallicus	-RLVLMKVISEHGTMYMRKLCHDIGIL	SGYGAHMRELRRTRTGIFDER-N	-LVTMHEFSEA			
I_aggregans	-RRVLFVRVKCQSGTYVRKLCHDIGLL	GVGAHMRELRRIGVAHFTENRD-I	-VTLHEVSEA			
N_maritimus	-RLLLTRVLCEAGTYIRKLYYDLGEIL	GPGATMIELRRTRVDQFRETDG-L	-VTLHELANA			
C_symbiosum	-RLVLMRVSCAGTYIRKLLYDMGEV	VGSGASMIELRRTRVDHFTEGSG-L	-VTMHELAEA			
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	250	260	270	280	290	300
	=====+=====+=====+=====+=====+=====+					
P_arsenaticum	YYIWKKYGDDTYLRSVLLPIEEIARHLPKIWVRDS	SAVDAVCHGAPLAAPGISKFEVPFSK				
P_aerophilum	YYIWKKHYGDDTYLRRVLLPIEEIARHLPKIWVRDS	SAVDAICNGAPLAAPGISKFETPFSK				
P_calidifontis	YYIWKKYGDDTYLRRVLLPIEEIARPLPKIWVRDS	SAVDALCNGAPLAAPGVAKFEHPFSR				
T_tenax	VYIWRNYGDDTVLRQIVKPIEEIARGVAKIWKDG	AVDAVCHGAPLAAPGVVKFEFPQR				
V_souniana	YTLYRDYGIEDLLRTYVKSVEYMVGHLPKWVRDS	SAVDAICHGAALAVPGIVKLTNNIKR				
T_modestius	LYLWKQYGDESLLRRYVVKPVEYMKVHLPRIFIR	DSAVDSVAHGAALAVPGVAKIEDGVER				
K_cryptofilum	YDSWRESGDESKIRKVILPLEEAVRHLPKIYVKD	SAVASLTHGASLKVKGICSLSRGIKK				
N_equitans	LYFWKEEGNEEYIRKVFLPVEEAVKHLKKIYILD	SAVAAIVHGANLAVPGIAKLYSNIKK				
M_kandleri	YEFWKEEGWEEPLRHVVRPMEEGLEHLPRIEIRD	TAVDAICHGANLAAPGIVRVEKGIQP				
M_janaschii	YVFWKEDGDEEELRRVIKPMEYGLRHLKKVVKD	SAVDAICHGADVVRGIAKLSKGIGK				
Thermofilum	YYIWKERGIDHFLRQVFLPVEAAIQHLPKWIRDS	AVDAVCHGAPLAVPGIVKLEGGIKV				
S_hellenicus	LYLWRNKGDERYL RKIILPVETAIAHLPKIIIRD	TAVDAIAHGAHLAVPGIARLTRDVAP				
D_mucosus	LLLWRSNGDERYLRRIVLPVETSIAHLPKIMILD	TAVDAIAHGANLAVPGIARLTRNIAK				
D_amyololyticus	LALWRSSGDERYIRRIILPVETSIAHLPKIMILD	TAVDAIAHGANLAVPGIARLTSNVER				
T_aggregans	LYLWRVEKDERMLRRVILPVETAVTHLPKIVIND	LAVDAIAHGASLAAPGVVRLTDNVSA				
I_pacificus	KFLWDHLKDDSL LKKYIMPCEYAVCHMQKIMVG	DGAVDAIAHGAHVAAPGVAALTDGIKK				
I_islandicus	KFLWEEKKDDSL LKKYVMPCEYSVCHMQKVMVD	GAVDIAHGAHVAAPGVAALTDGIRK				
I_hospitalis	KFLYDNYGDDSL LKKYIMPCEVATCHMPKIMIK	DGAVDAVAHGANSIRGVAALTDNMKK				
A_aceticus	VYRFREEGKDDYL RRAVLPGEVITCELPKVVLR	DSAVESVNGAPLAVPGISLLTPDVKA				
C_lagunuensis	VYRFKTEEKDDLL RKVIIPGEYSVCELPKVLVR	D TAVESVINGSPLAIPGISYNEGINR				
A_pernix	VIRWREEGKDDLL RRVVIPGEYSVCHIPKVLVR	DSAVESLTHGAQLAAPGVAAVEEGVEK				
S_hydrogenophil	LYRLRVDGKDDLL RRVVLPGEYSVCHLPKVVVR	D TAVESLVHGASLAVPGVVMLHEDIKR				
T_maritimus	LIRYRDEGKEDLL RKYVLPGEYSVCHLPKVVVR	D TAVESIVNGAMLAVPGIAMLHEGIEK				
P_abyssi	LYRWRNEGKEDLL RKYIKPIEYAVSHLPKIVIRD	TAVDAIAHGANLAVPGIVRLHEGIQR				
H_butylicus	IYRWKQEGKEDLL RKYILPIEYAVSHLPKIVVR	D TAVDAIAHGANLAVPGIARLHEGIKR				
P_fumarii	LYRWKQEGKDDLL RKYILPMEYAVAHLLKKVVIR	DSAVDAIAHGAHLAVPGIARLHADIKK				
A_ambivalens	LYMWKNCKDETDL RKILLPMEIGLCGIPKIIID	NAVNAIAYGATANVP GIVAYQN-FKK				
A_brierleyi	LYMWKSCKDEEDL RKILLPMEMAFCGIPKIVID	NAVDIAIYGASVMIP GIVAFQN-FKK				
S_tokodaii	LYMWKNCKDESDL RKILLPMEYATCGMPKILID	NAVDIAISYGAMLTAP GIVAYQR-FRV				
S_acidocaldarii	LYLYRNCKDESEL RRIILLPMEYGVCGIPKIV	VS D TAVNAITYGAKLNLP GILAYQN-FRK				
S_solfataricus	IYLYKNCKDETEL RRVLPMEFATCEIPKIVIED	SAVNALAYGAQLAVPG VVAYQN-FKK				
M_haknonensis	LYLYNNCREEDEL RRIIPMEYAFCGIPKIIVD	ETVNSLAYGSPLMAP GIVAFQP-FKK				
S_metallicus	VYMWKNCKDESFIR KIIMPMEIATCGIPKIMVD	NAVSAIAYGAKLTAPGV VGFQQ-FKK				
I_aggregans	LYIWRNLGDESFL RKMILPVEYIVAFLPKIVVK	SAVDAIAHGAQLAVPG ISIVAKNINR				
N_maritimus	FALWEEKKDDSKL KSMIQPVEHALSELKSVVIR	DS AIDAMCHGAQLAIPG ILQISPSLNK				
C_symbiosum	YAVWKEG-DGSRLQRIIRPVEEALAGIKAVVIR	DSAVDALCHGAQLAIPG ILQVSDNLRI				
	####	#####				#

	310	320	330	340	350	360
	=====+=====+=====+=====+=====+=====+					
P_arsenaticum	GDIVAMF-----					
P_aerophilum	GDLVAMFTLKGELIGIGRALVGSEEVKKMERGLVARTDRVVMRRGTYPAMWKRKAQSQSD					
P_calidifontis	GDLVAYFTLKGELIGIGRALVDSEEVKKMEKGLVARTDRVVMPRGTYPMPWRRGGKSFKS					
T_tenax	GDLVAYF-----					
V_souniana	KSLTAIM-----					
T_modestius	DRMAAIV-----					
K_cryptofilum	GSIVALMTLKGELIAIGRALMDFDEMLSADSGVAASIERVIMPRDLYPPMWKTG-----					
N_equitans	GDLVSIHTLKGELVAIGIALMDSKEMLEKKRGIAVDIERVFMKPGLYPKMWVSQG-----					
M_kandleri	GDLVAIFTLKGAEVALGVAKATWKEMLHADRGIMVDTKRVLMEPGTYPKAWGLKTPGE--					
M_janaschii	GETVLVETLKGAEVAVGKALMNTKEILNADKGVAVDVERVYMDRGTYPRMWKRKK-----					
Thermofilum	NSTVAIL-----					
S_hellenicus	NKTVAIL-----					
D_mucosus	GSTVAIL-----					
D_amylolyticus	NKTVAIL-----					
T_aggregans	GATVAVF-----					
I_pacificus	GDVVAIV-----					
I_islandicus	GDVVAIF-----					
I_hospitalis	GDVVAVVSLKGELVAIAQALVSSQEALKMEKGWVAKTKRVIMKPGTYPDVWRKKKASQQE					
A_aceticus	GGRVAML-----					
C_lagunuensis	GDLVSL-----					
A_pernix	GGMVALMTLKGELIGLKGALASAQEMLEAERGIVVSPTRIIMERGLYPRMWKRQQAPQGA					
S_hydrogenophil	GETVAVL-----					
T_maritimus	GDTVALL-----					
P_abyssi	GDLVALF-----					
H_butylicus	GDLVALL-----					
P_fumarii	GDVVAIF-----					
A_ambivalens	GDLVGLI-----					
A_brierleyi	GDLVGI-----					
S_tokodaii	KDTVAILTLKGELVAIGEADVDSQKLVDMMKKGIVVKPKRVLMPRDIYPRSWKKKHG-----					
S_acidocaldarii	NQDVAVL-----					
S_solfataricus	NDTVAVLTLKGELVATGNALMDSEELNAKKGIVVNLSRVFMQRDIYPKAWKKHES-----					
M_haknonensis	GDVVALI-----					
S_metallicus	DDVVCVITTKGELVSVGKALMDYRRLAKVDKGEVASTDRVFIDRDVYPKHWDKDGSS-					
I_aggregans	DDRVAIF-----					
N_maritimus	GDIVGIYQKGEAVALAEATMSGQEIQDAVKGYAFETKRIIMAPNTYPPKWKRTKPSSKE-					
C_symbiosum	GDLAGVYTQKGEVVALAEAEAEVIAATKGHAFKTKRLIMKTDTPKSWHSGKTYKEK					
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P_arsenaticum      --
P_aerophilum       SA
P_calidifontis     GT
T_tenax            --
V_souniana         --
T_modestius        --
K_cryptofilum      --
N_equitans         --
M_kandleri         --
M_janaschii        --
Thermofilum        --
S_hellenicus       --
D_mucosus          --
D_amylolyticus     --
T_aggregans        --
I_pacificus        --
I_islandicus       --
I_hospitalis       GG
A_aceticus         --
C_lagunuensis      --
A_pernix           --
S_hydrogenophil    --
T_maritimus        --
P_abyssi           --
H_butylicus        --
P_fumarii          --
A_ambivalens       --
A_brierleyi        --
S_tokodaii         --
S_acidocaldarius   --
S_solfataricus     --
M_haknonensis      --
S_metallicus       --
I_aggregans        --
N_maritimus        --
C_symbiosum        E-

```

Parameters used Minimum Number Of Sequences For A Conserved Position: 19 Minimum Number Of Sequences For A Flanking Position: 30 Maximum Number Of Contiguous Nonconserved Positions: 10 Minimum Length Of A Block: 5 Allowed Gap Positions: None Use Similarity Matrices: Yes
Flank positions of the 6 selected block(s) Flanks: [77 82] [87 175] [182 226] [231 244] [249 291] [300 304] New number of positions in /Users/yokobori/Desktop/Cbf5_2/list080725-5.fasta-gb: 202 (55% of the original 362 positions)