



S23\_25770  
 S23\_04520  
 S23\_24510\_2  
 S23\_62950  
 S23\_24350  
 S23\_64050  
 S23\_65150  
 S23\_64700  
 S23\_15940  
 S23\_30240  
 S23\_30190  
 S23\_59640  
 S23\_40490  
 S23\_25760  
 S23\_04510  
 S23\_40080  
 S23\_04350  
 S23\_01780\_1  
 S23\_08190  
 S23\_67760  
 S23\_46450  
 S23\_46030  
 S23\_52960  
 S23\_50060  
 S23\_59430  
 S23\_18970  
 S23\_16480  
 S23\_40070  
 S23\_04420  
 S23\_48810  
 S23\_48710  
 S23\_02170  
 S23\_67230  
 S23\_30900\_1  
 S23\_64210  
 S23\_34040  
 S23\_47550  
 S23\_53780  
 S23\_53770\_3  
 S23\_35360  
 S23\_13020  
 S23\_08130  
 S23\_63560  
 S23\_02970  
 S23\_09260  
 S23\_04480  
 S23\_58280  
 S23\_56790  
 S23\_69050  
 S23\_06470  
 S23\_64590  
 S23\_36930  
 S23\_21100  
 S23\_08000  
 S23\_30030  
 S23\_25640  
 S23\_61120  
 S23\_56880  
 S23\_27310  
 S23\_56210  
 S23\_30900\_2  
 S23\_68460  
 S23\_30890  
 S23\_53770\_2  
 S23\_53770\_1  
 S23\_24510\_1  
 S23\_39950  
 S23\_01780\_2  
 S23\_58290  
 S23\_04450  
 S23\_58310  
 S23\_04430  
 S23\_29780  
 S23\_13590  
 S23\_36910  
 S23\_56090  
 S23\_04500  
 S23\_12390  
 S23\_35780  
 S23\_13580  
 S23\_52420  
 S23\_52410  
 S23\_45010  
 S23\_33690  
 S23\_15370  
 S23\_58230  
 S23\_13230  
 S23\_66570  
 S23\_62340  
 S23\_67770  
 S23\_60920  
 S23\_20340  
 S23\_16590  
 S23\_56860  
 S23\_24520  
 S23\_68470  
 S23\_07610  
 S23\_30160  
 S23\_11970  
 S23\_39960  
 S23\_35600  
 S23\_34200



Orphan  
 Pair  
 Triad  
 Tetrad  
 Pentad+

**Cluster**

**Family**

**Domains**

Cluster	Family	Domains
S23_25770	CheY	1 Response_reg
S23_04520	CheY	1 Response_reg
S23_24510_2	Hybrid	2 Response_reg,1 HisKA,1 HATPase_c
S23_62950	CheY	1 Response_reg
S23_24350	Hybrid	2 PAS_4,1 HisKA,1 HATPase_c,1 Response_reg
S23_64050	CheY	1 Response_reg
S23_65150	Hybrid	2 PAS_4,1 HisKA,1 HATPase_c,1 Response_reg
S23_64700	Hybrid	1 PAS_3,1 HisKA,1 HATPase_c,1 Response_reg
S23_15940	Hybrid	1 PAS,1 HisKA,1 HATPase_c,1 Response_reg
S23_30240	Hybrid	1 PAS,1 HisKA,1 HATPase_c,1 Response_reg
S23_30190	Hybrid	2 PAS_3,1 PAS_4,1 HisKA,1 HATPase_c,1 Response_reg
S23_59640	Hybrid	1 HAMP,1 HisKA,1 HATPase_c,1 Response_reg
S23_40490	Hybrid	2 PAS_4,1 HisKA,1 HATPase_c,1 Response_reg
S23_25760	Hybrid	2 PAS,1 HisKA,1 HATPase_c,1 Response_reg
S23_04510	Hybrid	1 HAMP,3 PAS,1 HisKA,1 HATPase_c,1 Response_reg
S23_40080	Hybrid	1 CHASE3,1 PAS_4,1 HisKA,1 HATPase_c,1 Response_reg
S23_04350	VieA	1 Response_reg,1 EAL
S23_01780_1	Hybrid	1 PAS_4,1 HisKA,1 HATPase_c,2 Response_reg
S23_08190	Hybrid	1 HisKA,1 HATPase_c,1 Response_reg
S23_67760	Hybrid	1 Response_reg,1 HisKA,1 HATPase_c
S23_46450	CheY	1 Response_reg
S23_46030	CheY	1 Response_reg
S23_52960	CheY	1 Response_reg
S23_50060	CheY	1 Response_reg
S23_59430	CheY	1 Response_reg
S23_18970	CheY	1 Response_reg
S23_16480	CheY	1 Response_reg
S23_40070	CheY	1 Response_reg
S23_04420	CheY	1 Response_reg
S23_48810	OmpR	1 Response_reg,1 Trans_reg_C
S23_48710	OmpR	1 Response_reg,1 Trans_reg_C
S23_02170	OmpR	1 Response_reg,1 Trans_reg_C
S23_67230	OmpR	1 Response_reg,1 Trans_reg_C
S23_30900_1	PleD	2 Response_reg,1 GGDEF
S23_64210	Hybrid	1 HisKA,1 HATPase_c,1 Response_reg
S23_34040	Hybrid	1 PAS_4,1 HisKA,1 HATPase_c,1 Response_reg
S23_47550	Unorthodox	1 Cache_1,1 HAMP,1 HisKA,1 HATPase_c,1 Response_reg,1 Hpt
S23_53780	Classic	1 Response_reg,1 PAS_3,1 HWE_HK
S23_53770_3	Hybrid	11 HAMP,1 GAF,1 HisKA,1 HATPase_c,3 Response_reg
S23_35360	AmiR_NasR	1 Response_reg,1 ANTAR
S23_13020	NtrC	1 Response_reg,1 AAA,1 HTH_8
S23_08130	NarL	1 Response_reg,1 HTH_LUXR
S23_63560	unclassified	1 Response_reg
S23_02970	CheY	1 Response_reg
S23_09260	VieA	1 Response_reg,1 EAL
S23_04480	CheY	1 Response_reg
S23_58280	CheB	1 Response_reg,1 CheB_methylst
S23_56790	CheB	1 Response_reg,1 CheB_methylst
S23_69050	PrrA	1 Response_reg,1 HTH_8
S23_06470	PrrA	1 Response_reg,1 HTH_8
S23_64590	NarL	1 Response_reg,1 HTH_LUXR
S23_36930	NtrC	1 Response_reg,1 AAA_5,1 HTH_8
S23_21100	NarL	1 Response_reg,1 HTH_LUXR
S23_08000	NarL	1 Response_reg,1 HTH_LUXR
S23_30030	NarL	1 Response_reg,1 HTH_LUXR
S23_25640	NarL	1 Response_reg,1 HTH_LUXR
S23_61120	CheY	1 Response_reg
S23_56880	RpfG	1 Response_reg,1 HD
S23_27310	CheY	1 Response_reg
S23_56210	OmpR	1 Response_reg,1 Trans_reg_C
S23_30900_2	PleD	2 Response_reg,1 GGDEF
S23_68460	Hybrid	1 HisKA,1 HATPase_c,1 Response_reg
S23_30890	CheY	1 Response_reg
S23_53770_2	Hybrid	11 HAMP,1 GAF,1 HisKA,1 HATPase_c,3 Response_reg
S23_53770_1	Hybrid	11 HAMP,1 GAF,1 HisKA,1 HATPase_c,3 Response_reg
S23_24510_1	Hybrid	2 Response_reg,1 HisKA,1 HATPase_c
S23_39950	CheY	1 Response_reg
S23_01780_2	Hybrid	1 PAS_4,1 HisKA,1 HATPase_c,2 Response_reg
S23_58290	CheY	1 Response_reg
S23_04450	CheY	1 Response_reg
S23_58310	CheA	1 Hpt,1 H-kinase_dim,1 HATPase_c,2 CheW,1 Response_reg
S23_04430	CheA	1 Hpt,1 H-kinase_dim,1 HATPase_c,2 CheW,1 Response_reg
S23_29780	NarL	1 Response_reg,1 HTH_LUXR
S23_13590	NarL	1 Response_reg,1 GerE
S23_36910	NtrC	1 Response_reg,1 AAA_5,1 HTH_8
S23_56090	NarL	1 Response_reg,1 GerE
S23_04500	NarL	1 Response_reg,1 HTH_LUXR
S23_12390	NarL	1 Response_reg,1 HTH_LUXR
S23_35780	NarL	1 Response_reg,1 HTH_LUXR
S23_13580	CheY	1 Response_reg
S23_52420	CheY	1 Response_reg
S23_52410	NarL	1 Response_reg,1 GerE
S23_45010	OmpR	1 Response_reg,1 Trans_reg_C
S23_33690	OmpR	1 Response_reg,1 Trans_reg_C
S23_15370	OmpR	1 Response_reg,1 Trans_reg_C
S23_58230	OmpR	1 Response_reg,1 Trans_reg_C
S23_13230	OmpR	1 Response_reg,1 Trans_reg_C
S23_66570	OmpR	1 Response_reg,1 Trans_reg_C
S23_62340	OmpR	1 Response_reg,1 Trans_reg_C
S23_67770	OmpR	1 Response_reg,1 Trans_reg_C
S23_60920	OmpR	1 Response_reg,1 Trans_reg_C
S23_20340	OmpR	1 Response_reg,1 Trans_reg_C
S23_16590	OmpR	1 Response_reg,1 Trans_reg_C
S23_56860	CheY	1 Response_reg
S23_24520	Hybrid	1 HisKA,1 HATPase_c,1 Response_reg
S23_68470	NarL	1 Response_reg,1 HTH_LUXR
S23_07610	OmpR	1 Response_reg,1 Trans_reg_C
S23_30160	NtrC	1 Response_reg,1 AAA_5,1 HTH_8
S23_11970	NtrC	1 Response_reg,1 AAA_5,1 HTH_8
S23_39960	Hybrid	1 Response_reg,1 HisKA,2,1 HATPase_c
S23_35600	unclassified	1 REC
S23_34200	unclassified	1 REC