

Supplementary Table 1

Phylum	Class	Species	Protein	MCP type
Actinobacteria	Actinobacteria	<i>Kineococcus radiotolerans</i> SRS30216	A6W942_KINRD	IVb
Firmicutes	Clostridia	<i>Caldicellulosiruptor bescii</i> DSM 6725	B9MML0_ANATD	IVb
Firmicutes	Clostridia	<i>Caldicellulosiruptor bescii</i> DSM 6725	B9MPD9_ANATD	IVb
Firmicutes	Clostridia	<i>Caldicellulosiruptor saccharolyticus</i> DSM 8903	A4XHP4_CALS8	IVb
Firmicutes	Clostridia	<i>Carboxydotherrnus hydrogenoformans</i> Z-2901	Q3ADA8_CARHZ	IVb
Firmicutes	Clostridia	<i>Syntrophomonas wolfei</i> subsp. wolfei str. Goettingen	Q0AWZ6_SYNW W	IVb
Firmicutes	Clostridia	<i>Thermoanaerobacter tengcongensis</i> MB4	273068.TTE1033	IVb
Proteobacteria	Alphaproteobacteria	<i>Caulobacter</i> sp. K31	B0T3W8_CAUSK	IVb
Proteobacteria	Alphaproteobacteria	<i>Methylobacterium nodulans</i> ORS 2060	B8IF81_METNO	IVb
Proteobacteria	Alphaproteobacteria	<i>Methylobacterium</i> sp. 4-46	B0UBC2_METS4	IVb
Proteobacteria	Alphaproteobacteria	<i>Rhodopseudomonas palustris</i> BisA53	Q07KG7_RHOP5	IVa
Proteobacteria	Alphaproteobacteria	<i>Rhodopseudomonas palustris</i> BisB18	Q20XK1_RHOPB	IVa
Proteobacteria	Alphaproteobacteria	<i>Rhodospirillum centenum</i> SW	B6IQQ4_RHOCS	IVb
Proteobacteria	Alphaproteobacteria	<i>Rhodospirillum rubrum</i> ATCC 11170	Q2RRX4_RHORT	IVb
Proteobacteria	Betaproteobacteria	<i>Burkholderia glumae</i> BGR1	C5AK88_BURGB	IVb
Proteobacteria	Gammaproteobacteria	<i>Alteromonas macleodii</i> 'Deep ecotype'	B4RWW9_ALTMD D	IVb
Proteobacteria	Gammaproteobacteria	<i>Vibrio cholerae</i> M66-2	C3LM98_VIBCM	IVb
Proteobacteria	Gammaproteobacteria	<i>Vibrio cholerae</i> MJ-1236	593588.VCD_002942	IVb
Proteobacteria	Gammaproteobacteria	<i>Vibrio cholerae</i> O1 biovar El Tor str. N16961	243277.VC1403	IVb
Proteobacteria	Gammaproteobacteria	<i>Vibrio cholerae</i> O395	A5F8C4_VIBC3	IVb

Cytoplasmic receptors that contain two consecutive MA domains.