

Table S1(a): Percentage Identity table of *pmoA* from six methanotrophs used to analyze the conserved residues of the pocket sites.

UNIPROT ID	D5MJE0	A9QPE3	W6DH29	Q50541	Q607G3	G4SZ63
D5MJE0	100.00	49.17	49.17	47.11	53.72	50.83
A9QPE3	49.17	100.00	49.80	50.20	51.42	56.68
W6DH29	49.17	49.80	100.00	86.51	57.89	60.32
Q50541	47.11	50.20	86.51	100.00	58.70	59.51
Q607G3	53.72	51.42	57.89	58.70	100.00	78.14
G4SZ63	50.83	56.68	60.32	59.51	78.14	100.00

Table S1(b): Percentage Identity table of *pmoB* from six methanotrophs used to analyze the conserved residues of the pocket sites.

UNIPROT ID	A9QPE4	D5MJE0	W6D960	Q9KX50	G1UBD1	G4SZ64
A9QPE4	100.00	38.23	34.32	33.33	36.86	36.36
D5MJE0	38.23	100.00	35.96	36.12	41.56	38.54
W6D960	34.32	35.96	100.00	80.43	46.57	43.87
Q9KX50	33.33	36.12	80.43	100.00	45.52	44.31
G1UBD1	36.86	41.56	46.57	45.52	100.00	71.74
G4SZ64	36.36	38.54	43.87	44.31	71.74	100.00

Table S1(c): Percentage Identity table of *pmoC* from six methanotrophs used to analyze the conserved residues of the pocket sites.

UNIPROT ID	D5MIN0	A9QPE2	Q9KX51	W6D653	Q603F1	G4SZ62
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D5MIN0	100.00	51.37	49.00	50.60	48.43	47.60
A9QPE2	51.37	100.00	53.33	51.76	50.77	49.80
Q9KX51	49.00	53.33	100.00	86.33	59.84	58.30
W6D653	50.60	51.76	86.33	100.00	60.24	59.11
Q603F1	48.43	50.77	59.84	60.24	100.00	72.69
G4SZ62	47.60	49.80	58.30	59.11	72.69	100.00