

Table S4. List of primers for fusion-PCR for domain swapping assay

| Oligonucleotide Primers | | Oligonucleotide sequence (5'→3') | Reference | |
|-------------------------|---|--|--|--|
| Apical region | primer for the research of apical region of <i>groEL1</i> : | P1: GCTCTAGAGA AACTCTGCACGATGCTCTCTC | PCR amplification of upstream sequence (0.5kb) + the sequence of N-terminal (1-597bp) of <i>groEL2</i> | |
| | | P2: GGTCCGTCACGAAGTACGGGGACAGGTAGCCGCGT CGA ACTGCATGCCC | | |
| | | P3: GGGCATGCAGTTCGACCGGGCTACCTGTCCCCGTACT TC GTGACGGACC | PCR amplification of C-terminal (597 bp to the end) of <i>groEL1</i> | |
| | | P4: CGGGATCCCTACATGCCCATACCGCCCATAACCG | | |
| | | P5: GCTCTAGAGA AACTCTGCACGATGCTCTCTC | PCR amplification of upstream sequence(0.5kb)+ the sequence of N-terminal (1-597bp) of <i>groEL2</i> +the sequence(597-1068bp) of <i>groEL1</i> | |
| | | P6: GGAGCTTCTCGCGGTCGTAGTCGCTGGAGGTCTCCTC GAT CTGGGCGCGG | | |
| | | P7: CCGCGCCCAGATCGAGGAGACCTCCAGCGACTACGAC CG CGAGAAGCTCC | | PCR amplification of C-terminal (1068bp to the end) of <i>groEL2</i> |
| | | P8: CGGGATCCTCAGTAGTCCATGTCGTGCGCCGC | | |
| | primer for the research of apical region of <i>groEL2</i> | P1: GCTCTAGAAACACCTCCCGTCATTCCCCG | PCR amplification of upstream sequence(0.5kb)+ the sequence of N-terminal (1-597bp) of <i>groEL1</i> | |
| | | P2: GGTGGTACACGAAGTACGGGGACACGTAGCCGCGT CGA ACTGCATGCCT | | |
| | | P3: AGGCATGCAGTTCGACCGGGCTACGTGTCCCCGTACT TC GTGACCAACC | PCR amplification of C-terminal (597 bp to the end) of <i>groEL2</i> | |
| | | P4: CGGGATCCTCAGTAGTCCATGTCGTGCGCCGC | | |
| | | P5: GCTCTAGAAACACCTCCCGTCATTCCCCG | PCR amplification of upstream sequence (0.5kb)+ the sequence of N-terminal (1-597bp) of <i>groEL1</i> + the sequence (597-1068bp) of <i>groEL2</i> | |
| | | P6: GGAGCTTCTCGCGGTCGTAGTCGCTGGTGACGGAGTC AA TCTGCGTGCGG | | |
| | | P7: CCGCACGCAGATTGACTCCGTCACCAGCGACTACGAC CG CGAGAAGCTCC | | PCR amplification of C-terminal (1068bp to the end) of <i>groEL1</i> |
| | | P8: CGGGATCCCTACATGCCCATACCGCCCATAACCG | | |

| | | | | |
|---------------------------------------|--|---|---|--|
| Equatorial-N region | primer for the research of equatorial -N region of <i>groEL1</i> | P1: GCTCTAGAGAACTCTGCACGATGCTCTCTC | PCR amplification of upstream sequence (0.5kb) of <i>groEL2</i> | |
| | | P2: CGTCGAAAAGAATGTCCTTCGCCATCGCAACCTCCTGAT TCACTGGGGG | | |
| | | P3: CCCCCAGTGAATTCAGGAGGTTGCGATGGCGAAGGAC AT TCTTTTCGACG | PCR amplification the sequence of <i>groEL1</i> | |
| | | P4: CGGGATCCCTACATGCCATACCGCCCATAACCG | | |
| | | P5: GCTCTAGAGAACTCTGCACGATGCTCTCTC | PCR amplification of upstream sequence (0.5kb) of <i>groEL2</i> +the sequence(1-438bp) of <i>groEL1</i> | |
| | | P6: CGTTGGCGGAGATGGTCCCCACCTGGGCAATCTCCTTC TT GTCCTTGGTC | | |
| | | P7: GACCAAGGACAAGAAGGAGATTGCCAGGTGGGGAC CA TCTCCGCCAACG | | |
| | | P8: CGGGATCCTCAGTAGTCCATGTCGTGCGCCGC | PCR amplification of C-terminal (438bp to the end) of <i>groEL2</i> | |
| | primer for the research of equatorial -N region of <i>groEL2</i> | P1: GCTCTAGAACACCTCCCGTCATTCCCCG | | PCR amplification of upstream sequence (0.5kb) of <i>groEL1</i> |
| | | P2: GGAAGAAAATTCCTTCGCTGCCATTTGGATGGTTCTTG AAGGAAGAGT | | |
| | | P3: ACTCTTCCTTCAAGGAACCATCCAAATGGCAGCGAAG GA AATTTCTTCC | | PCR amplification the sequence of <i>groEL2</i> |
| | | P4: CGGGATCCTCAGTAGTCCATGTCGTGCGCCGC | | |
| | | P5: GCTCTAGAACACCTCCCGTCATTCCCCG | | PCR amplification of upstream sequence (0.5kb) of <i>groEL1</i> +the sequence (1-438bp) of <i>groEL2</i> |
| | | P6: CGTTGGCGGAGATGGTACCGACCTGGGTGATGGCCTT CTT GTCGGCGGTG | | |
| | | P7: CACCGCCGACAAGAAGGCCATCACCCAGGTCGGTACC AT CTCGCCAACG | | |
| P8: CGGGATCCCTACATGCCATACCGCCCATAACCG | | PCR amplification of C-terminal (438bp to the end) of <i>groEL1</i> | | |
| Equatorial-C region | primer for the research of equatorial -C region of <i>groEL1</i> | | p1: GCTCTAGAGAACTCTGCACGATGCTCTCTC | PCR amplification of upstream sequence (0.5kb)+the sequence of N-terminal (1-1254bp) of <i>groEL2</i> |
| | | p2: CGTCCAGCGCCTTGAGGCAGCGGATGTAGGCCACGCC GC CGCCAGGGACG | | |
| | | P3: CGTCCCTGGCGGCGGCGTGGCCTACATCCGCTGCCTC AA GCGCTGGACG | PCR amplification of C-terminal (1254bp to the end) of <i>groEL1</i> | |

| | | | |
|--|-----|---|---|
| | | P4: CGGGATCCCTACATGCCCATACCGCCCATACCG | |
| primer for the research of equatorial -C region of <i>groEL2</i> | p1: | GCTCTAGAACACCTCCCGTCATTCCCCG | PCR amplification of upstream sequence (0.5kb)+the sequence of N-terminal (1-1254bp) of <i>groEL1</i> |
| | p2: | TCTCCAGCGCGGGCAGCGCGGGAGGTAGGCCACGC CGC CGCCAGGGACG | |
| | P3: | CGTCCCTGGCGGCGGCGTGGCCTACCTCCGCGCGCTG CC CGCGCTGGAGA | PCR amplification of C-terminal (1254bp to the end) of <i>groEL2</i> |
| | P4: | CGGGATCCTCAGTAGTCCATGTCGTCGCCGC | |

* The underlined letters indicated the Restriction sites.