

LanFP1 MPLPA---THDHLHGSINGHEFDLVGGGKGNPNAGSLVTTAKSTK-GALKFSPYLMIPHLGGYFYQYLPYDPG-P
LanFP2 MSLPT---THDLHIFGSVNGAEFDLVGGGKGNPNDDGTLETSVKSTR-GALPCSPLLIGPNLGGYFYQYLPFPGG-A
LanFP3 MPLPA---THEIHLHGSVNGHEFDLVGGGKGNPKAGSLVTEVVKSTM-GPLKFSPHLMIPHLGGYFYQYLPYDPG-P
LanFP4 MPLPT---THELHIFGSFNGVEFDLVGRGEGNPKDGSQNLHLKSTK-GPLQFSPWMLIPHLGGYFYQYLPYDPGEM
LanFP5 TPLPT---THELHIFGSFNGVEFDLVGRGEGNPKDGSYELNLKSTK-GALKFSPWMLVLPQIGYAFHQYLPYDPG-M
LanFP6 MPLPK---THELHIFGSFNGVKFDMVGGEGTGNPNEGSEELNKLKSTN-GPLKFSPLYLIPHLGGYAFNQYLPYDPG-M
LanFP7 MSVPT---NLDLHIYGSINGMEFDLVGGGSGNPNDDGSLSVNVKSTK-GALRVSPLLVGPHLGGYHYQYLPYDPG-P
LanFP8 MSLPT---THDCHMFGSINGHEFDLVGGGNGNPNDDGTLETVKRSTK-GALPFSVILAPNLGGYHYQYLPYPAG-T
LanFP9 MPLPA---THEIHLHGSINGHEFDLAGGGKGNPNAGSLVTTAKSTK-GPLKFSPHLMIPHLGGYFYQYLPYDPG-P
LanFP10 LPLPK---THELHIFGSFNGVEFDLVGRGIGNPNEGSEELNAKFTK-GPLKFSPLYLIPHLGGYFYQYLPYDPG-M
LanFP11 MPLPA---THEIHIYGSVNGHEFDLVGGGKGNPNAGSLVTEVVKSTM-GPLKFSPHLMIPHLGGYFYQYLPYDPG-P
LanFP12 QPLPT---THEVHVYGSINGVEFDLVGGGKGNPKDGSSEIQVKSTK-GPLGFSPYIVVPNIIGYFHQYLPYDPG-M
GFP1_Ponme_33243032 MPDM---KLECHISGTMNGEEFELIGAGDNTDEGRMTNKKMSIK-GPISFSPYLLSHILGGYHYHFATFPAGYE
GFP1_Ponpl_33243026 MPAM---KIECRISGTLNNGVVFELVGGGEGEIQGRMTNKKMSTK-GALTFSPYLLSHVMSGYFYHFHTYPSGYE
GFP_Chipo_85658701 MTTT---KIESRIHGNLNGEKFEFVGGGVGE--EGRLEIEMKTKD-KPLAFSPFLLSHCMGGYFYHFASEPKGTK
Nemve_156385591 56 YLSKSDAMKLLHFKMEGSVNGHCFEIQVGGEGKAFDGEHWSKLCVVKGKHLFPDILMPSMSYGTQKQFAKYPAGMT
Nemve_156388065 MSLSKDAMKLLHILEGSVNGHCFEIHGEGEGKAFEGEQWSKFTVKKGGPLPFSFDLIAPCLKYGSKPFVKYPDDMT
Monca_154814320 MSVIKTDKIKLRMEGAVNGHKFVIEGEGEGKPFDGKQTMDLTVIEGAPLPFAFDILTTFVGYGNRVFAKYPKDIP
Monca_154814322 MSVIKPDKIKLRMEGAVNGHKFVIEGDGKGPFEKGQTMDLTVIEGAPLPFAFDILTTFVGYGNRVFAKYPKDIP
Azami-Green_52839539 MSVIKPEMKIKLRMGRTVNGHNFVIEGEGKGNPYEGTQILDNLNTEGAPLPFAFDILTTFVGYGNRAFTKYPADIQ
Dronpa_56201403 MSVIKPDKIKLRMEGAVNGHFFAIEGGVGLGKPFEGKQSMDLVKEGEGPLPFAFDILTTFVGYGNRVFAKYPENIQ
EosFP_55667942 MSAIKPDMKIKLRMEGAVNGHFFVIDGDTGKPFEGKQSMDLVKEGEGPLPFAFDILTTFVGYGNRVFAEYDPDHIQ
CyanFP_154814310 MSVIKSPMKIKLRMDGIVNGHKFMITGEGEGKPFEGKQSMDLVKEGEGPLPFAFDILTTFVGYGNRVFAKYPKDIP
Kaede_23503508 MSLIKPEMKIKLRMEGAVNGHGFVIEGDGKGFPEEGKQSMDLVVKKEGAPLPFAFDILTTFVGYGNRVFAKYPDHIP
Photoconvert_125395854 MSVIKSVMNKLLRLEGAVNGHPFVIEGKGNHGFPEEGTQDILKTVKEGEGPLPFAFDILTTFVGYGNRVFAKYPDDIV
YFP_Corca_72256906 4 KQVITQEMKMVYHMDGCVNGHSFTIEGEGTKPYEGNQTLKLRVTKGGPLPFAFDILTATFCYGNRCFCYEPEDMP
NFCP_MONEF_55976263 MSVIATQMTYKVMYSGTVNGHYFEVEGDGKGRPYEGEQTVKLVTKGGPLPFAFDILTATFCYGNRCFCYEPEDIP
RFP_Dissp_85002146 4 KNVIKEFMRFKVRMEGTVNGHEFEIEGEGGRPYEGHNTVKLRVTKGGPLPFAFDILTATFCYGNRCFCYEPEDIP
GFP3_Astla_42521556 4 KQEIKKEMTMDYVMDGCVNGHSFTVKG DGAGKPYEGHQRLSLHVTGGQPLPFAFDILSAAFAYGNRCFTKYPKIIP
GFP_Renmu_12621060 7 NTCLQEVMSYKVNLEGI VNNHVFTMEGCGKGNILFGNQLVQIRVTKGAPLPFAFDIVSPAFOYGNRTFTKYPNDIS
YFP_Phial_40365351 4 ALLFHGKIPYVVEGEGVNDGHTFSIRGKGYGDASVGVDAQFICTT-GDVPVPWSTLVTTLTYGAQCFAYGPELK
GFP_AEQVI_1169893 4 EELFTGVVPIVLVELDGDVNGHKFSVSGEGEGDATYGLKTLKFICTT-GKLPVPWPTLVTTFSYGVQCFSRYPDHMK
Secondary structure sssssssssssss1ssssssssssss2ssssssssss3

LanFP1 --SPFQTSMLEGSGYAVYRVDFE-DGGKLTTEFKYSYEGS---HIKADMKLMGSGFPDDGPMVTSQIVDQDGCVSKKTYLNN
LanFP2 --SPFQTAIT-DGGYQVHRVFKFE-DGGVLSNCFRYTYEGG---KIKGEFQLIGSGFPAGGPMVSSGLTTLDRSVAKLQCSDD
LanFP3 --SPFQTAIT-DGGYQVHRVFKFE-DGGVLSNCFRYTYEGG---KIKGEFQLIGSGFPAGGPMVSSGLTTLDRSVAKLQCSDD
LanFP4 --SPYQAAAMYGGSGYLMHRITMQYE-DGAKISGHYKYTYEGS---HVKGEFQLIGTGFPDGPVMTNQLTAADWCVDKLLYPND
LanFP5 --SPFQAAMQDGSYQVHRITMQFE-DGASLTAHFRYTYEGS---HIKGEFQVIGTGFPADGPMVTKNLTAAADWCVVKMVPND
LanFP6 --SPFQAAMQDESQYVHRITMQYE-DGAFVTAANLRYTYEGS---HIKGEFQVIGTGFPDGPVMTNKLTAALDWSVVKFVYVND
LanFP7 --SPFQAAMVNGGYQMHRSFNFE-DGAVLTATNYSYSGG---KIQGEFHLVGSFCFPDPSFVMTNALTGLDRSVAKLQCSDD
LanFP8 --SPYQAAIT-NGGYQKHRTFKFE-DGGVMTINFRYTYSGN---KIKGEFHLVGSFCFPDPSFVMTNALTGLDRSVAKLQCSDD
LanFP9 --SPFQATMLEGSGYTVHRVDFE-DGGKLSIEFKYSYEGS---HIKADMKFTGTGFPEDGPMVTSQIVDQDGCVSKKTYLND
LanFP10 --SPFQAAMHDSGYQVHRITMQYE-DGASVTAHYRYTYEGS---HIKGEFQVIGTGFPDGPVMTNKLTAADWCVVKMVPND
LanFP11 --SPFQTAIT-DGGYQVHRVFKFE-DGGVLSNCFRYTYEGG---KIKGEFQLIGSGFPAGGPMVSSGLTTLDRSVAKLQCSDD
LanFP12 --SPFQAAADDGSGYVVRHNIQFE-DGASLTGIYRYSYDAG---HIKGEFRVVGSGFPADGPMVTKSLTAADWCVATMLFPND
GFP1_Ponme_33243032 --NIYLHAM-KNGGYSNVRTERYE-DGGIISITFNRYRYEGN---KIIGDFKVVGTGFPDPSVIFTDKIIRSNATVEHLHPMGD
GFP1_Ponpl_33243026 --NPLHAA-NNGGYTNRRIEKYE-DGGVLSNCFRYTYEGG---KIKGEFQLIGSGFPAGGPMVSSGLTTLDRSVAKLQCSDD
GFP_Chipo_85658701 --NIYLHAM-TNGGYTNRRIEKYE-DGGIISITFNRYRYEGN---KIIGDFKVVGTGFPDPSVIFTDKIIRSNATVEHLHPMGD
GFP1_Nemve_156385591 --DFKAAV-ENGLSWERTMTFE-DGGYCTIVNTSELKDG---SLHYHTNFHGINLKPDPGPMQKRTMGWLPVETNIPRND
GFP2_Nemve_156388065 --DFKAAV-ENGLSWERTMSLEODGGFCVSVNTSKLDKD---GLHYHMTFQGINLDPNGPVMKKMTMGWLPVETNIPRND
GFP1_Monca_154814320 --DYFKQTF--PEGYSWERSMTFE-DQGICITVTSIDIKLEGD---CFYIEIRFYGVNFPSSGPMVQKKTTLKWPSTEKMYVRDQ
GFP2_Monca_154814322 --DYFKQTF--PEGYSWERSMTYE-DQGICITATNDITMMKGVDDCFVYKIRFDGVNFPANGPVMQKKTTLKWPSTEKMYVRDQ
Azami-Green_52839539 --DYFKQTF--PEGYHWERSMTYE-DQGICITATSNISMRGD---CFYDIREFDGVNFPANGPVMQKKTTLKWPSTEKMYVRDQ
Dronpa_56201403 --DYFKQSF--PEGYSWERSMNYE-DGGICINATNDITLDGD---CYIYEIRFDGVNFPANGPVMQKKTTLKWPSTEKLYVRDQ
EosFP_55667942 --DYFKQSF--PKGYSWERSLTFE-DGGICINATNDITLDGD---TFYKVRFDGVNFPANGPVMQKKTTLKWPSTEKMYVRDQ
CyanFP_154814310 --DYFKQSF--PEGYSWERSMTFE-DQGVCTVTSIDIKLEGD---CFYIEIRFYGVNFPSSGPMVQKKTTLKWPSTENMYVRDQ
Kaede_23503508 --DYFKQSF--PKGYSWERSLTFE-DGGVCIATNDITLKGD---TFYKVRFDGVNFPANGPVMQKKTTLKWEASTEKMYLRDQ
Photoconvert_125395854 --DYFKLSF--PEGYSWERSMVEE-DGGVCIATNDITLKGD---TFYKVRFDGVNFPANGPVMQKKTTLKWEASTEKMYLRDQ
YFP_Corca_72256906 --DYVYKQSF--PEGYSFERTMFE-DGACCTVSVHLSLTKN---CFVHNSTFHGVNFPANGPVMQKKTTLKWPSTEKMYRFDQ
NFCP_MONEF_55976263 --DYVYKQSF--PEGYFERTMFE-DGACCTVSVHLSLTKN---CFVHNSTFHGVNFPANGPVMQKKTTLKWPSTEKMYRFDQ
RFP_Dissp_85002146 --DYKLLSF--PEGYFERTMFE-DGACCTVSVHLSLTKN---CFVHNSTFHGVNFPANGPVMQKKTTLKWPSTEKMYRFDQ
GFP3_Astla_42521556 --DMFKQAF--PGGMSWERTMTFE-DGGVASVSADISIEKDG---CFKHRSKFVGVNFPVNGPVMQKKTTLKWPSTEKMYRFDQ
GFP_Renmu_12621060 --DYFIQSF--PAGFMYERTLRYE-DGGLVEIRSDINLIED---KFVYRVEYKGSNFPDDGPMVQKKTTLKWPSTEKMYRFDQ
YFP_Phial_40365351 --DFYKSCM--PEGYVQERTITFE-GDGVFKTRAETVTFENG---SVYNRVKLNQGGFKKDGHVLGKN-LEFNTPHCLYIWDG
GFP_AEQVI_1169893 QHDFFKSAM--PEGYVQERTITFE-DGNYKTRAETVTFENG---SVYNRVKLNQGGFKKDGHVLGKN-LEFNTPHCLYIWDG
Secondary structure sssssssssss4ssssssssss5 sssssssssss6 sssssssss7

LanFP1 ---NTIVDSFDWSYNLQ---GKRYRARVSSHYIFDK-PFSADLMKKQPVFVYRKCHVKASK---TEVTLDEREKAFYELA
LanFP2 ---CTITGTNNWSFCTTD--GKRHQADVQNTNYTFK-PLPAGLKEKMPIFLGHQIEVQASK---TEINLSEKVKAFIDTV
LanFP3 ---NTIVDSFDWSYNLQ---GKRYRARVTSNYIFGK-PLAADVMKKQPVFVYRKCYVKSTQ---TEITLDEREKAFYEVN
LanFP4 ---KTIISKFDWYTTTDD--GKRYQAKVQTNDFK-PMAANYLQKQPMFVFRKVELEHKS---TEVKEFKQWQKAFHDIM
LanFP5 ---KTIILSTFDWYTTTTE--GKRYQSTVRTNYTFK-PMAANILQKQPMFVFRKTELQHSK---TELTFKEWQKAFSDVM
LanFP6 ---KTIILSTFDKTYTTTDD--GKRYQCTFRENNTFAK-PMAADILQKQPMFIFHKTELQHSNN--AELTFKEKQAFSDMK
LanFP7 ---DKLAEFVDWYRTSS--GGRYRATVQTNDFK-PIAAGLKNMMPMFVFRQLEVTGSK---TEISLQEQKAFSTVL
LanFP8 ---KTIIGSDNMWTFIEKGGKDKRYKAEVMTNATFAQ-NLQPLGNMPLFVFRKVDIECSK---TEVSLVEKEKVFQDLI
LanFP9 ---NTIVDNFDWYTNLQ---GKRYRARVTSNYIFDK-PFSADLMKKQPVFVYRKCHVKASK---TEINLDEREKAFYELA
LanFP10 ---KTIILSTVDCSYTTTE--GKRYQSKMRENNTFAK-PMAADILQKQPMFVFRKTELQHSK---TELTFKEWQKAFSDVM
LanFP11 ---NTIVDNFDWYTNLQ---GKRYRAHVTSHYIFGK-PLAADVMKKQPVFVYRKCYVKSTQ---TEITLDEREKAFYEVN
LanFP12 ---TTVSTIDWTCPTTS--GKRYHATVRTNYTFK-PIAGSILQKQPMFVFRKTEVKASK---SEINLSEKQAFHDLV
GFP1_Ponme_33243032 ---NTLVNAYTRTYLLKD--GGYSAQVNNMHFKSAIHTTMLQNGGSMFTYRVVEETHQ---NEVAIVEYQNVFKTPT
GFP1_Ponpl_33243026 ---NVLVGSFARTFSLRD--GGYSAQVNNMHFKSAIHTTMLQNGGSMFTYRVVEETHQ---NEVAIVEYQNVFKTPT
GFP_Chipo_85658701 ---NLIASSYARAFQLKD--GSFYTAEVKNNIDFKNPIH-ESFSKSGPMFTHRRVEETHK---ENLAMVEYQNVFNSAP
GFP1_Nemve_156385591 ---TLGDIINMLLKVND--GSFLRVQFETVYRFMKPVPAGFKMPPHFFMAYRLTRVDNDEHC-DTVIQHEWSEAFSCFL
GFP2_Nemve_156388065 ---TLVGDINMLLKVND--GSFLRVKFTVYRFMKPVPAGFKMPPHFFIAFKLTRVENDADC-NVLLHEWGKAFSCFL
GFP1_Monca_154814320 ---VLKGDVNMALLLEG--GGHYRCDFKTTYKAKK---FVQLPDYHFVDHRIEIVSHDKDY-NKVKLYEHAEAHSGLP
GFP2_Monca_154814322 ---VLKGDVNMALLLEG--GGHYRCDFKTTYKAKK---VVQLPDYHFVDHRIEIVSHDKDY-NKVKLYEHAEAHSGLP
Azami-Green_52839539 ---VLKGDVNMALLLEG--GGHYRCDFKTTYKAKK---DVRLPDYHFVDHRIEILKHKDY-NKVKLYENAVARYSML
Dronpa_56201403 ---VLKGDVNMALSLEG--GGHYRCDFKTTYKAKK---VVQLPDYHFVDHRIEIKSHDKDY-SNVNLHEHAEAHSELP
EosFP_55667942 ---VLTGDIITMALLLEG--NAHYRCDFRTTYKAKE---KGVKLPYHFVDHCIEIILSHDKDY-NKVKLYEHAVAHSGLP
CyanFP_154814310 ---VLLGDVSRITLLEG--NKHHRNCFRSTYRACK---GVVLPYHFVDHRIEILSHDKDY-NTVEVYENAVARPSML
Kaede_23503508 ---VLTGDIITMALLK---DVHYRCDFRTTYKSRQ---EGVKLPYHFVDHCISILRHKDY-NEVKLYEHAVAHSGLP
Photoconvert_125395854 ---VVKGDVNMALLK---GGHYRCDFKTTYKAKK---YVPLPDYHFVDHRIEITSHDKDY-NIVNVFEDAVAHSGLT
YFP_Corca_72256906 ---NLKGDVTFMLKLEG--GQQRHRCQFQTTYKAKH---AVKMPNHIIEHRLVRSQDG---DAVQLKEHAVAKCFTA
NFCP_MONEF_55976263 ---MLIGNFMALKLEG--GGHYLCEFKTTYKAKK---PVKMPGYHYVDRKLDVTNHNKDY-TSVEQCEISIAKRPV
RFP_Dissp_85002146 ---VLKGEIHKALKLD--GGHYLVEFKTIYMAK---PVQLPGYHYVDSKLDITSHNKDY-TIVEQYERTEGRHSLF
GFP3_Astla_42521556 ---TLKGEHTMFLKLEG--GKRYRATVQTNDFK-PIAAGLKNMMPMFVFRQLEVTGSK---TEISLQEQKAFSTVL
GFP_Renmu_12621060 ---VLVGEVITLVYKLSN--GKYYRCHMKTLMKSKG---VVKEFSDYHFIEHRLVRSQDG---DAVQLKEHAVAKCFTA
YFP_Phial_40365351 QANHGLKSAFKIMHEITG--SKEDFIVADHTQMNTPIGGGPVHVPEYHHITYHVTLKSDVTDHRDNMSLIVTVRAVDCR
GFP_AEQVI_1169893 KQKNGIKVNFKIRHNIED--GSVQLADHYQONTPIG--DGPVLLPDNHYLSTQSALSQKDPNEKRDHMLLEFVTAAGITH
Secondary structure sssssssssss8 sssssssssss9 sssssssss10 sssssssss11