

Supplemental Figure 1A.

ST MKTFTAKPETVKRDWYVVDATGKTLGLRLATELARLRGKHKAETYPHVDTGDIYIIVLNADKQVAVTGNKRTDKVYVYHHTGHIGGIKQATFEEMIAARRPERV
EC MKTFTAKPETVKRDWYVVDASGKTLGLRLATELARLRGKHKAETYPHVDTGDIYIIVLNADKQVAVTGNKRTDKVYVYHHTGHIGGIKQATFEEMIAARRPERV
EP MKTFTAKPETVKRDWYVVDANGKTLGLRLATELARLRGKHKAETYPHVDTGDIYIIVLNADKQVAVTGNKRTDKVYVYHHTGHIGGIKQATFEEMIAARRPERV
PL MKTFTAKPETVKRDWYVVDADGKTLGLRLATEVARLRGKHKAETYPHVDTGDIYIIVLNADKQVAVTGNKRTDKVYVYHHTGHIGGIKQATFEEMIAARRPERV
SG MKTFTAKPETVKRDWYVVDAGKTLGLRLATELARLRGKHKAETYPHVDTGDIYIIVLNADKQVAVTGNKRTDKVYVYHHTGHIGGIKQATFEEMIAARRPERV
BA MKTFTAKPETVKRDWYVVDATGKTLGLRLATELARLRGKHKAETYPHVDTGDIYIIVLNADKQVAVTGNKRTDKVYVYHHTGHIGGIKQATFEEMIAARRPERV
BF ----MSRLRIIKRLWYIVDAKNKVLGRSLSNIAKYLIIGKHKEVYAPYVDGDIYIIVINSKDVCTGRKYKDKIYRHTGVYGGIKKLTFFQKMSYVYVYV
WG MKTFTAKPETVKRDWYVVDATGKTLGLRLATELARLRGKHKAETYPHVDTGDIYIIVLNADKQVAVTGNKRTDKVYVYHHTGHIGGIKQATFEEMIAARRPERV

ST IEIAVKGMLPKGGLGRAMFRKLVVYAGNEHNHAAQPPQVLD-IMPVIKVENEPFDVALRRFKRSCAKAGVLAEVRRREFYEKPTTERKRAKASAVKRHA
EC IEIAVKGMLPKGGLGRAMFRKLVVYAGNEHNHAAQPPQVLD-IMPVIKVENEPFDVALRRFKRSCAKAGVLAEVRRREFYEKPTTERKRAKASAVKRHA
EP IEIAVKGMLPKGGLGRAMFRKLVVYAGTEHNHAAQPPQVLD-IMPVIKVENEPFDVALRRFKRSCAKAGVLAEVRRREFYEKPTTERKRAKASAVKRHA
YW IEIAVKGMLPKGGLGRAMFRKLVVYAGTEHNHAAQPPQVLD-IMPVIKVENEPFDVALRRFKRSCAKAGVLAEVRRREFYEKPTTERKRAKASAVKRHA
PL IEIAVKGMLPKGGLGRAMFRKLVVYAGSEHNHAAQPPQVLD-IMPVIKVENEPFDVALRRFKRSCAKAGVLAEVRRREFYEKPTTERKRAKASAVKRHA
SG IEIAVKGMLPKGGLGRAMFRKLVVYAGTEHNHAAQPPQVLD-IMPVIKVENEPFDVALRRFKRSCAKAGVLAEVRRREFYEKPTTERKRAKASAVKRHA
BA IEIAVKGMLPKGGLGRAMFRKLVVYAGSEHNHAAQPPQVLD-IMPVIKVENEPFDVALRRFKRSCAKAGVLAEVRRREFYEKPTTERKRAKASAVKRHA
BF IESVVRGMLPKGGLGRAMFRKLVVYAGSEHNHAAQPPQVLD-IMPVIKVENEPFDVALRRFKRSCAKAGVLAEVRRREFYEKPTTERKRAKASAVKRHA
WG IYKSVKMLPKGGLGRAMFRKLVVYAGSEHNHAAQPPQVLD-IMPVIKVENEPFDVALRRFKRSCAKAGVLAEVRRREFYEKPTTERKRAKASAVKRHA

ST KKLARENARRTRYM---ARYFRRRKCFRTAEGVQEIDYKDIALTKNYITESGKIVPSRITGTRAKYQRLARAKRARYLSLLPYTDHRHMSNIIKQI
EC KKLARENARRTRYM---ARYFRRRKCFRTAEGVQEIDYKDIALTKNYITESGKIVPSRITGTRAKYQRLARAKRARYLSLLPYTDHRHMSNIIKQI
EP KKLARENARRTRYM---ARYFRRRKCFRTAEGVQEIDYKDIALTKNYITESGKIVPSRITGTRAKYQRLARAKRARYLSLLPYTDHRHMSNIIKQI
YW KKLARENARRTRYM---ARYFRRRKCFRTAEGVQEIDYKDIALTKNYITESGKIVPSRITGTRAKYQRLARAKRARYLSLLPYTDHRHMSNIIKQI
PL KKLARENARRTRYM---ARYFRRRKCFRTAEGVQEIDYKDIALTKNYITESGKIVPSRITGTRAKYQRLARAKRARYLSLLPYTDHRHMSNIIKQI
SG KKLARENARRTRYM---ARYFRRRKCFRTAEGVQEIDYKDIALTKNYITESGKIVPSRITGTRAKYQRLARAKRARYLSLLPYTDHRHMSNIIKQI
BA KKLARENARRTRYM---ARYFRRRKCFRTAEGVQEIDYKDIALTKNYITESGKIVPSRITGTRAKYQRLARAKRARYLSLLPYTDHRHMSNIIKQI
BF KKLARENARRTRYM---ARYFRRRKCFRTAEGVQEIDYKDIALTKNYITESGKIVPSRITGTRAKYQRLARAKRARYLSLLPYTDHRHMSNIIKQI
WG KKLARENARRTRYM---ARYFRRRKCFRTAEGVQEIDYKDIALTKNYITESGKIVPSRITGTRAKYQRLARAKRARYLSLLPYTDHRHMSNIIKQI

ST EQEQMKQNVPSFRPQDTEVVKVWVVEGKTKRLQAFEGVIVIAIRNGLHSAFTVRKISNGEGVERVFOHSPVVDISIAVKKRGAARAKLYLRLERTGKAA
EC EQEQMKQNVPSFRPQDTEVVKVWVVEGKTKRLQAFEGVIVIAIRNGLHSAFTVRKISNGEGVERVFOHSPVVDISIAVKKRGAARAKLYLRLERTGKAA
EP EQEQMKQNVPSFRPQDTEVVKVWVVEGKTKRLQAFEGVIVIAIRNGLHSAFTVRKISNGEGVERVFOHSPVVDISIAVKKRGAARAKLYLRLERTGKAA
YW EQEQMKQNVPSFRPQDTEVVKVWVVEGKTKRLQAFEGVIVIAIRNGLHSAFTVRKISNGEGVERVFOHSPVVDISIAVKKRGAARAKLYLRLERTGKAA
PL EQEQMKQNVPSFRPQDTEVVKVWVVEGKTKRLQAFEGVIVIAIRNGLHSAFTVRKISNGEGVERVFOHSPVVDISIAVKKRGAARAKLYLRLERTGKAA
SG EQEQMKQNVPSFRPQDTEVVKVWVVEGKTKRLQAFEGVIVIAIRNGLHSAFTVRKISNGEGVERVFOHSPVVDISIAVKKRGAARAKLYLRLERTGKAA
BA EQEQMKQNVPSFRPQDTEVVKVWVVEGKTKRLQAFEGVIVIAIRNGLHSAFTVRKISNGEGVERVFOHSPVVDISIAVKKRGAARAKLYLRLERTGKAA
BF EQEQMKQNVPSFRPQDTEVVKVWVVEGKTKRLQAFEGVIVIAIRNGLHSAFTVRKISNGEGVERVFOHSPVVDISIAVKKRGAARAKLYLRLERTGKAA
WG EQEQMKQNVPSFRPQDTEVVKVWVVEGKTKRLQAFEGVIVIAIRNGLHSAFTVRKISNGEGVERVFOHSPVVDISIAVKKRGAARAKLYLRLERTGKAA

ST RIKERLN---MPKIKTVRGAARFKKTAGG-GFKKHANLRIHILTKKATKRKRLRPMKMSKGLDLVIAACLYAMARVRRKGVARARHKKILKQAKGY
EC RIKERLN---MPKIKTVRGAARFKKTAGG-GFKKHANLRIHILTKKATKRKRLRPMKMSKGLDLVIAACLYAMARVRRKGVARARHKKILKQAKGY
EP RIKERLN---MPKIKTVRGAARFKKTAGG-GFKKHANLRIHILTKKATKRKRLRPMKMSKGLDLVIAACLYAMARVRRKGVARARHKKILKQAKGY
YW RIKERLN---MPKIKTVRGAARFKKTAGG-GFKKHANLRIHILTKKATKRKRLRPMKMSKGLDLVIAACLYAMARVRRKGVARARHKKILKQAKGY
PL RIKERLN---MPKIKTVRGAARFKKTAGG-GFKKHANLRIHILTKKATKRKRLRPMKMSKGLDLVIAACLYAMARVRRKGVARARHKKILKQAKGY
SG RIKERLN---MPKIKTVRGAARFKKTAGG-GFKKHANLRIHILTKKATKRKRLRPMKMSKGLDLVIAACLYAMARVRRKGVARARHKKILKQAKGY
BA RIKERLN---MPKIKTVRGAARFKKTAGG-GFKKHANLRIHILTKKATKRKRLRPMKMSKGLDLVIAACLYAMARVRRKGVARARHKKILKQAKGY
BF RIKERLN---MPKIKTVRGAARFKKTAGG-GFKKHANLRIHILTKKATKRKRLRPMKMSKGLDLVIAACLYAMARVRRKGVARARHKKILKQAKGY
WG RIKERLN---MPKIKTVRGAARFKKTAGG-GFKKHANLRIHILTKKATKRKRLRPMKMSKGLDLVIAACLYAMARVRRKGVARARHKKILKQAKGY

ST GARSRYRVAFQAVIKAGQYAYDRRQRKRQFQRLMIARINAAARQNGISYSKFINGLKASVEIDRKLADIAVFDKVAFTALVEKAKAALAMKGIHP
EC GARSRYRVAFQAVIKAGQYAYDRRQRKRQFQRLMIARINAAARQNGISYSKFINGLKASVEIDRKLADIAVFDKVAFTALVEKAKAALAMKGIHP
EP GARSRYRVAFQAVIKAGQYAYDRRQRKRQFQRLMIARINAAARQNGISYSKFINGLKASVEIDRKLADIAVFDKVAFTALVEKAKAALAMKGIHP
YW GARSRYRVAFQAVIKAGQYAYDRRQRKRQFQRLMIARINAAARQNGISYSKFINGLKASVEIDRKLADIAVFDKVAFTALVEKAKAALAMKGIHP
PL GARSRYRVAFQAVIKAGQYAYDRRQRKRQFQRLMIARINAAARQNGISYSKFINGLKASVEIDRKLADIAVFDKVAFTALVEKAKAALAMKGIHP
SG GARSRYRVAFQAVIKAGQYAYDRRQRKRQFQRLMIARINAAARQNGISYSKFINGLKASVEIDRKLADIAVFDKVAFTALVEKAKAALAMKGIHP
BA GARSRYRVAFQAVIKAGQYAYDRRQRKRQFQRLMIARINAAARQNGISYSKFINGLKASVEIDRKLADIAVFDKVAFTALVEKAKAALAMKGIHP
BF GARSRYRVAFQAVIKAGQYAYDRRQRKRQFQRLMIARINAAARQNGISYSKFINGLKASVEIDRKLADIAVFDKVAFTALVEKAKAALAMKGIHP
WG GARSRYRVAFQAVIKAGQYAYDRRQRKRQFQRLMIARINAAARQNGISYSKFINGLKASVEIDRKLADIAVFDKVAFTALVEKAKAALAMKGIHP

ST NYEITATSCGCVNKTSTVGHDLNLDVCGCHPFFYTGKQVAVDTGGRVERFNKRFSP- GSK--MAGKIREKIKLVSSAGTGHFYTTTKNKRTPKEPL
EC NYEITATSCGCVNKTSTVGHDLNLDVCGCHPFFYTGKQVAVDTGGRVERFNKRFSP- GSK--MAGKIREKIKLVSSAGTGHFYTTTKNKRTPKEPL
EP NYEITATSCGCVNKTSTVGHDLNLDVCGCHPFFYTGKQVAVDTGGRVERFNKRFSP- GSK--MAGKIREKIKLVSSAGTGHFYTTTKNKRTPKEPL
YW NYEITATSCGCVNKTSTVGHDLNLDVCGCHPFFYTGKQVAVDTGGRVERFNKRFSP- GSK--MAGKIREKIKLVSSAGTGHFYTTTKNKRTPKEPL
PL NYEITATSCGCVNKTSTVGHDLNLDVCGCHPFFYTGKQVAVDTGGRVERFNKRFSP- GSK--MAGKIREKIKLVSSAGTGHFYTTTKNKRTPKEPL
SG NYEITATSCGCVNKTSTVGHDLNLDVCGCHPFFYTGKQVAVDTGGRVERFNKRFSP- GSK--MAGKIREKIKLVSSAGTGHFYTTTKNKRTPKEPL
BA NYEITATSCGCVNKTSTVGHDLNLDVCGCHPFFYTGKQVAVDTGGRVERFNKRFSP- GSK--MAGKIREKIKLVSSAGTGHFYTTTKNKRTPKEPL
BF NYEITATSCGCVNKTSTVGHDLNLDVCGCHPFFYTGKQVAVDTGGRVERFNKRFSP- GSK--MAGKIREKIKLVSSAGTGHFYTTTKNKRTPKEPL
WG NYEITATSCGCVNKTSTVGHDLNLDVCGCHPFFYTGKQVAVDTGGRVERFNKRFSP- GSK--MAGKIREKIKLVSSAGTGHFYTTTKNKRTPKEPL

ST ELKKFDPVVRQHVIVYEAKEIKMAK---APRARVRKRVKQVSDGVAIHASFNNTIVITITDRQGNALGWATAGSGFRGSRKSTPFAAQVAERCAEAVKE
EC ELKKFDPVVRQHVIVYEAKEIKMAK---APRARVRKRVKQVSDGVAIHASFNNTIVITITDRQGNALGWATAGSGFRGSRKSTPFAAQVAERCAEAVKE
EP ELKKFDPVVRQHVIVYEAKEIKMAK---APRARVRKRVKQVSDGVAIHASFNNTIVITITDRQGNALGWATAGSGFRGSRKSTPFAAQVAERCAEAVKE
YW ELKKFDPVVRQHVIVYEAKEIKMAK---APRARVRKRVKQVSDGVAIHASFNNTIVITITDRQGNALGWATAGSGFRGSRKSTPFAAQVAERCAEAVKE
PL ELKKFDPVVRQHVIVYEAKEIKMAK---APRARVRKRVKQVSDGVAIHASFNNTIVITITDRQGNALGWATAGSGFRGSRKSTPFAAQVAERCAEAVKE
SG ELKKFDPVVRQHVIVYEAKEIKMAK---APRARVRKRVKQVSDGVAIHASFNNTIVITITDRQGNALGWATAGSGFRGSRKSTPFAAQVAERCAEAVKE
BA ELKKFDPVVRQHVIVYEAKEIKMAK---APRARVRKRVKQVSDGVAIHASFNNTIVITITDRQGNALGWATAGSGFRGSRKSTPFAAQVAERCAEAVKE
BF ELKKFDPVVRQHVIVYEAKEIKMAK---APRARVRKRVKQVSDGVAIHASFNNTIVITITDRQGNALGWATAGSGFRGSRKSTPFAAQVAERCAEAVKE
WG ELKKFDPVVRQHVIVYEAKEIKMAK---APRARVRKRVKQVSDGVAIHASFNNTIVITITDRQGNALGWATAGSGFRGSRKSTPFAAQVAERCAEAVKE

ST GIKNLEVMVKGPGRESTIRALNAAAGFRITNITDVTPIPHNGCRPPKRRVMAR IAGINIPDQKHTVIALTSIYIGKTRSQAI CAEAIAEAVKISEL
EC GIKNLEVMVKGPGRESTIRALNAAAGFRITNITDVTPIPHNGCRPPKRRVMAR IAGINIPDQKHTVIALTSIYIGKTRSQAI CAEAIAEAVKISEL
EP GIKNLEVMVKGPGRESTIRALNAAAGFRITNITDVTPIPHNGCRPPKRRVMAR IAGINIPDQKHTVIALTSIYIGKTRSQAI CAEAIAEAVKISEL
YW GIKNLEVMVKGPGRESTIRALNAAAGFRITNITDVTPIPHNGCRPPKRRVMAR IAGINIPDQKHTVIALTSIYIGKTRSQAI CAEAIAEAVKISEL
PL GIKNLEVMVKGPGRESTIRALNAAAGFRITNITDVTPIPHNGCRPPKRRVMAR IAGINIPDQKHTVIALTSIYIGKTRSQAI CAEAIAEAVKISEL
SG GIKNLEVMVKGPGRESTIRALNAAAGFRITNITDVTPIPHNGCRPPKRRVMAR IAGINIPDQKHTVIALTSIYIGKTRSQAI CAEAIAEAVKISEL
BA GIKNLEVMVKGPGRESTIRALNAAAGFRITNITDVTPIPHNGCRPPKRRVMAR IAGINIPDQKHTVIALTSIYIGKTRSQAI CAEAIAEAVKISEL
BF GIKNLEVMVKGPGRESTIRALNAAAGFRITNITDVTPIPHNGCRPPKRRVMAR IAGINIPDQKHTVIALTSIYIGKTRSQAI CAEAIAEAVKISEL
WG GIKNLEVMVKGPGRESTIRALNAAAGFRITNITDVTPIPHNGCRPPKRRVMAR IAGINIPDQKHTVIALTSIYIGKTRSQAI CAEAIAEAVKISEL

ST SEEQIDTLRDEAVKIVVEGLDRREISMSIKRMLDLGTCYRGLRHRRLPVRGQRTKTNRTRKGRPKIKKMKVRSVVKLCL---NCKIVKRDGIVRVC
EC SEEQIDTLRDEAVKIVVEGLDRREISMSIKRMLDLGTCYRGLRHRRLPVRGQRTKTNRTRKGRPKIKKMKVRSVVKLCL---NCKIVKRDGIVRVC
EP SEEQIDTLRDEAVKIVVEGLDRREISMSIKRMLDLGTCYRGLRHRRLPVRGQRTKTNRTRKGRPKIKKMKVRSVVKLCL---NCKIVKRDGIVRVC
YW SEEQIDTLRDEAVKIVVEGLDRREISMSIKRMLDLGTCYRGLRHRRLPVRGQRTKTNRTRKGRPKIKKMKVRSVVKLCL---NCKIVKRDGIVRVC
PL SEEQIDTLRDEAVKIVVEGLDRREISMSIKRMLDLGTCYRGLRHRRLPVRGQRTKTNRTRKGRPKIKKMKVRSVVKLCL---NCKIVKRDGIVRVC
SG SEEQIDTLRDEAVKIVVEGLDRREISMSIKRMLDLGTCYRGLRHRRLPVRGQRTKTNRTRKGRPKIKKMKVRSVVKLCL---NCKIVKRDGIVRVC
BA SEEQIDTLRDEAVKIVVEGLDRREISMSIKRMLDLGTCYRGLRHRRLPVRGQRTKTNRTRKGRPKIKKMKVRSVVKLCL---NCKIVKRDGIVRVC
BF SEEQIDTLRDEAVKIVVEGLDRREISMSIKRMLDLGTCYRGLRHRRLPVRGQRTKTNRTRKGRPKIKKMKVRSVVKLCL---NCKIVKRDGIVRVC
WG SEEQIDTLRDEAVKIVVEGLDRREISMSIKRMLDLGTCYRGLRHRRLPVRGQRTKTNRTRKGRPKIKKMKVRSVVKLCL---NCKIVKRDGIVRVC

ST SAEPKHKQRQ---MRLNLTSPAEGSKAKGRGLGIGSLGKTGGRGHKQKRSRSGGVRRGFEQGMPLYRRLPKFGFT-SRKAATAEVRLSDLA
EC SAEPKHKQRQ---MRLNLTSPAEGSKAKGRGLGIGSLGKTGGRGHKQKRSRSGGVRRGFEQGMPLYRRLPKFGFT-SRKAATAEVRLSDLA
EP SAEPKHKQRQ---MRLNLTSPAEGSKAKGRGLGIGSLGKTGGRGHKQKRSRSGGVRRGFEQGMPLYRRLPKFGFT-SRKAATAEVRLSDLA
YW SAEPKHKQRQ---MRLNLTSPAEGSKAKGRGLGIGSLGKTGGRGHKQKRSRSGGVRRGFEQGMPLYRRLPKFGFT-SRKAATAEVRLSDLA
PL SAEPKHKQRQ---MRLNLTSPAEGSKAKGRGLGIGSLGKTGGRGHKQKRSRSGGVRRGFEQGMPLYRRLPKFGFT-SRKAATAEVRLSDLA
SG SAEPKHKQRQ---MRLNLTSPAEGSKAKGRGLGIGSLGKTGGRGHKQKRSRSGGVRRGFEQGMPLYRRLPKFGFT-SRKAATAEVRLSDLA
BA SAEPKHKQRQ---MRLNLTSPAEGSKAKGRGLGIGSLGKTGGRGHKQKRSRSGGVRRGFEQGMPLYRRLPKFGFT-SRKAATAEVRLSDLA
BF SAEPKHKQRQ---MRLNLTSPAEGSKAKGRGLGIGSLGKTGGRGHKQKRSRSGGVRRGFEQGMPLYRRLPKFGFT-SRKAATAEVRLSDLA
WG SAEPKHKQRQ---MRLNLTSPAEGSKAKGRGLGIGSLGKTGGRGHKQKRSRSGGVRRGFEQGMPLYRRLPKFGFT-SRKAATAEVRLSDLA

ST KVEGGVDLNTLKAANIIGIQIEFAKVLAGEVTTPTVRLGRVTKGARAIEAAGGKIEEMAKTIKIQTRSAIGRLPKHKATLLGLGLRRIGHTVERE
EC KVEGGVDLNTLKAANIIGIQIEFAKVLAGEVTTPTVRLGRVTKGARAIEAAGGKIEEMAKTIKIQTRSAIGRLPKHKATLLGLGLRRIGHTVERE
YF LVEGDVIDLNTLKAANVVGIQMEFVKVILSGEVNRAVTLRGLRVTKGARAIEAAGGKIEEMAKTIKVTQTKSSIGRLPKHKATLLGLGLRRIGHTVERE
PL KVEGGVDLNTLKAANVVGIQIEFAKVLAGEVTTPTVRLGRVTKGARAIEAAGGKIEEMAKTIKIQTRSAIGRLPKHKATLLGLGLRRIGHTVERE
AVEGDIDLNLKAANIIGIQIEFAKVLAGEVTTPTVRLGRVTKGARAIEAAGGKIEEMAKTIKVTQTKSSIGRLPKHKATLLGLGLRRIGHTVERE
SG HVEGDVIDLNTLKAANIIGIQIEFAKVLAGEVTTPTVRLGRVTKGARAIEAAGGKIEEMAKTIKIQTRSAIGRLPKHKATLLGLGLRRIGHTVERE
BA NLSNTIDLNLVQENIKNKIYAKIILSGKLVPLIIRGLLVSGARSEIENTGGKVEGMKN-IKIQTKSAIGRLPKHKATLLGLGLRRIGHTVERE
BF RIPENVIDLNLVKYDVSRIKRFVKIIMSGTFFDKPVIIRNLRSKRGARDLKSXVGGRIE-EGEMLKIQTRSSIGCPKHKATLLGLGLRRIGHTVERE
WG KIKDSFDLVLKKNKIINSKIKVKIIFSKFNKNIKNLKVSNKAKKEIEFFGQTN--MNLKIQTKSSIGCLKHKSTYLVGLGLRRIGHTVERE

ST DTPAVRGMVNAVSMVVKV--EEMSMQDPIADMLTRIRNGQAANKAVTMPSSKLKVAIANVLKEEGFIEDPKVEGDTKPELETLTKYFQG-KAVVESIQR
EC DTPAIRGMINAVSMVVKV--EEMSMQDPIADMLTRIRNGQAANKAVTMPSSKLKVAIANVLKEEGFIEDPKVEGDTKPELETLTKYFQG-KAVVESIQR
YF DTPAVRGMVNAVSMVVKV--EEMSMQDPIADMLTRIRNGQAANKAVTMPSSKLKVAIANVLKEEGFIEDPKVEGDTKPELETLTKYFQG-KAVVESIQR
EP DTPAVRGMVNAVSMVVKV--EEMSMQDPIADMLTRIRNGQAANKAVTMPSSKLKVAIANVLKEEGFIEDPKVEGDTKPELETLTKYFQG-KAVVESIQR
PL DTPAIRGMINAVSMVVKV--EEMSMQDPIADMLTRIRNGQAANKAVTMPSSKLKVAIANVLKEEGFIEDPKVEGDTKPELETLTKYFQG-KAVVESIQR
SG DTPAVRGMVNAVSMVVKV--EEMSMQDPIADMLTRIRNGQAANKAVTMPSSKLKVAIANVLKEEGFIEDPKVEGDTKPELETLTKYFQG-KAVVESIQR
BA DTPSIOGMVKKISYLKIQ--EEMSMQDPIADMLTRIRNGQAANKAVTMPSSKLKVAIANVLKEEGFIEDPKVEGDTKPELETLTKYFQG-KAVVESIQR
BF DTPSIRGMVNAVSMVVKV--EEMSMQDPIADMLTRIRNGQAANKAVTMPSSKLKVAIANVLKEEGFIEDPKVEGDTKPELETLTKYFQG-KAVVESIQR
WG NSPRLGMINISYLVKI--KDMSMQDPIADMLTRIRNGQAANKAVTMPSSKLKVAIANVLKEEGFIEDPKVEGDTKPELETLTKYFQG-KAVVESIQR

ST VSRPGLRIYKRRDELKPKVMAGLGIIVVSTSGKVMTRDRAARQAGLGEIICVYMAKQSMKAREVVRKVALADKYFAKRAELKAIISDVNATDEDNRNAVLK
EC VSRPGLRIYKRRDELKPKVMAGLGIIVVSTSGKVMTRDRAARQAGLGEIICVYMAKQSMKAREVVRKVALADKYFAKRAELKAIISDVNATDEDNRNAVLK
YF ISRPLRIYKRRDELKPKVMAGLGIIVVSTSGKVMTRDRAARQAGLGEIICVYMAKQSMKAREVVRKVALADKYFAKRAELKAIISDVNATDEDNRNAVLK
EP ISRPLRIYKRRDELKPKVMAGLGIIVVSTSGKVMTRDRAARQAGLGEIICVYMAKQSMKAREVVRKVALADKYFAKRAELKAIISDVNATDEDNRNAVLK
PL ISRPLRIYKRRDELKPKVMAGLGIIVVSTSGKVMTRDRAARQAGLGEIICVYMAKQSMKAREVVRKVALADKYFAKRAELKAIISDVNATDEDNRNAVLK
SG ISRPLRIYKRRDELKPKVMAGLGIIVVSTSGKVMTRDRAARQAGLGEIICVYMAKQSMKAREVVRKVALADKYFAKRAELKAIISDVNATDEDNRNAVLK
BA ISRPLRIYKRRDELKPKVMAGLGIIVVSTSGKVMTRDRAARQAGLGEIICVYMAKQSMKAREVVRKVALADKYFAKRAELKAIISDVNATDEDNRNAVLK
BF ISRPLRIYKRRDELKPKVMAGLGIIVVSTSGKVMTRDRAARQAGLGEIICVYMAKQSMKAREVVRKVALADKYFAKRAELKAIISDVNATDEDNRNAVLK
WG ISRPLRIYKRRDELKPKVMAGLGIIVVSTSGKVMTRDRAARQAGLGEIICVYMAKQSMKAREVVRKVALADKYFAKRAELKAIISDVNATDEDNRNAVLK

ST LQTLPRDSSPSRQRNRCQTRGPHAFRLKFLGSLRIKVEAAMRGEIPLKKAASWMAA-KIRRDDEVILTGDGKGRKGVKN-VLSSGKVIIEGINLVKK
EC LQTLPRDSSPSRQRNRCQTRGPHAFRLKFLGSLRIKVEAAMRGEIPLKKAASWMAA-KIRRDDEVILTGDGKGRKGVKN-VLSSGKVIIEGINLVKK
YF LQSLPRDSSPSRQRNRCQTRGPHAFRLKFLGSLRIKVEAAMRGEIPLKKAASWMAA-KIRRDDEVILTGDGKGRKGVKN-VLSSGKVIIEGINLVKK
EP LQTLPRDSSPSRQRNRCQTRGPHAFRLKFLGSLRIKVEAAMRGEIPLKKAASWMAA-KIRRDDEVILTGDGKGRKGVKN-VLSSGKVIIEGINLVKK
PL LQTLPRDSSPSRQRNRCQTRGPHAFRLKFLGSLRIKVEAAMRGEIPLKKAASWMAA-KIRRDDEVILTGDGKGRKGVKN-VLSSGKVIIEGINLVKK
SG LQTLPRDSSPSRQRNRCQTRGPHAFRLKFLGSLRIKVEAAMRGEIPLKKAASWMAA-KIRRDDEVILTGDGKGRKGVKN-VLSSGKVIIEGINLVKK
BA LQSPRDSPPSRQRNRCQTRGPHAFRLKFLGSLRIKVEAAMRGEIPLKKAASWMAA-KIRRDDEVILTGDGKGRKGVKN-VLSSGKVIIEGINLVKK
BF LQTLPRDSSPSRQRNRCQTRGPHAFRLKFLGSLRIKVEAAMRGEIPLKKAASWMAA-KIRRDDEVILTGDGKGRKGVKN-VLSSGKVIIEGINLVKK
WG LQSLPRDSSPSRQRNRCQTRGPHAFRLKFLGSLRIKVEAAMRGEIPLKKAASWMAA-KIRRDDEVILTGDGKGRKGVKN-VLSSGKVIIEGINLVKK

ST HQKVPALNQPGGIIVEKEAIIQVSNVAIFNAATGKADRVGFRFEDGKVRFFKSNSETIKMIQEOTMLNADNSGARRVMCIKVLGSSHRRYAGVGDIIK
EC HQKVPALNQPGGIIVEKEAIIQVSNVAIFNAATGKADRVGFRFEDGKVRFFKSNSETIKMIQEOTMLNADNSGARRVMCIKVLGSSHRRYAGVGDIIK
YF HQKVPALNQPGGIIVEKEAIIQVSNVAIFNAATGKADRVGFRFEDGKVRFFKSNSETIKMIQEOTMLNADNSGARRVMCIKVLGSSHRRYAGVGDIIK
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PL HQKVPALNQPGGIIVEKEAIIQVSNVAIFNAATGKADRVGFRFEDGKVRFFKSNSETIKMIQEOTMLNADNSGARRVMCIKVLGSSHRRYAGVGDIIK
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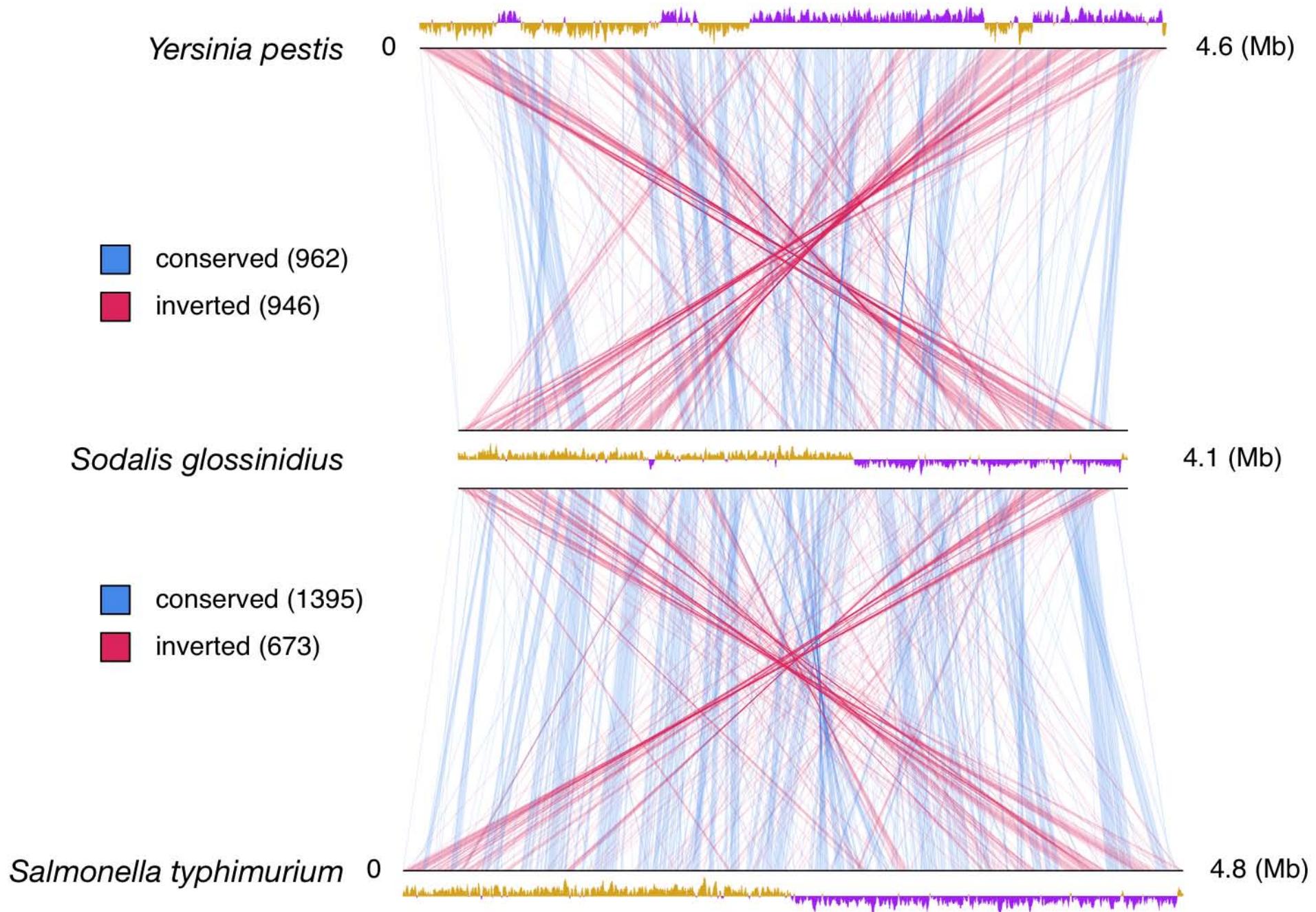
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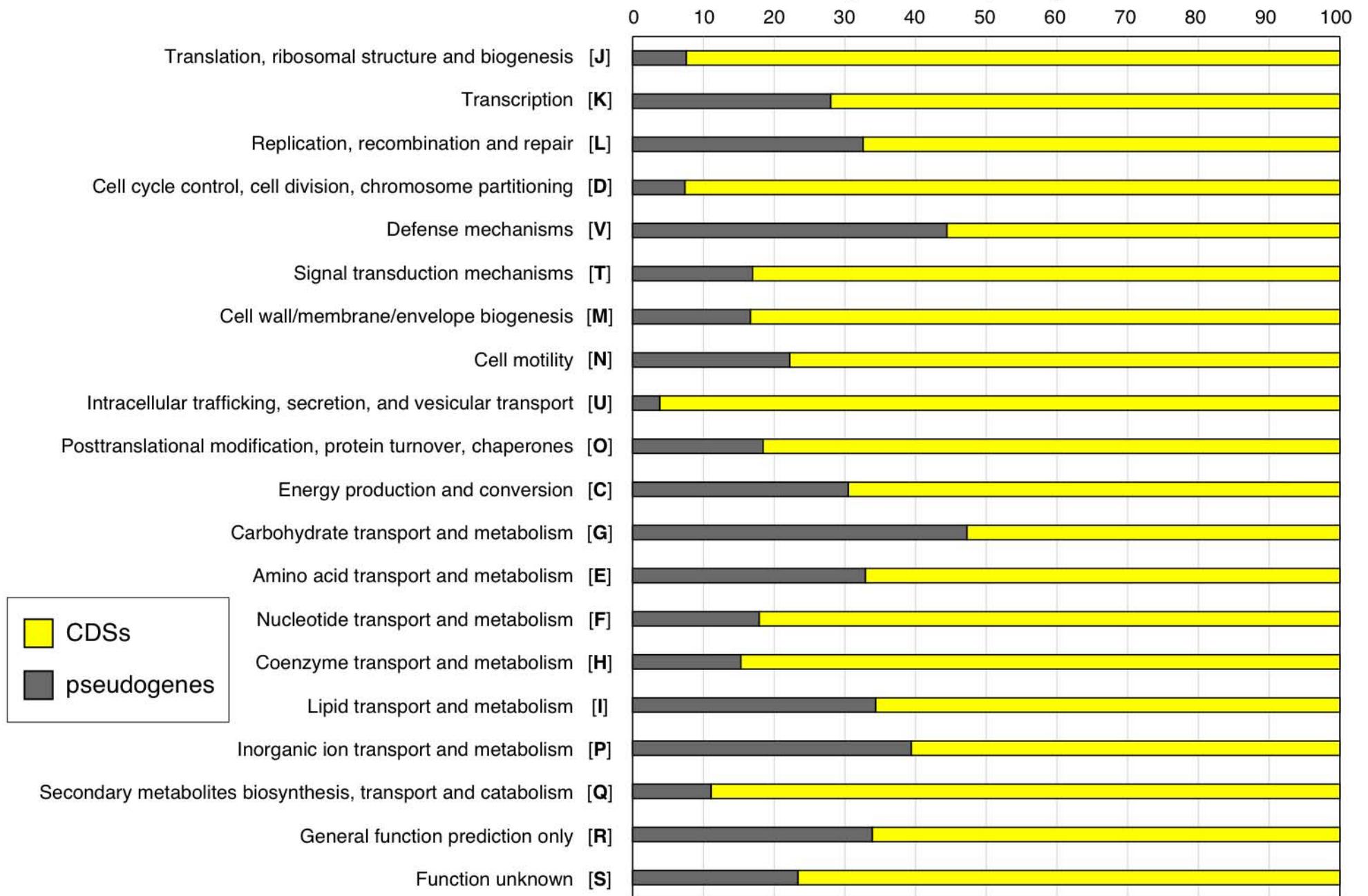
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Supplemental Figure 1B.

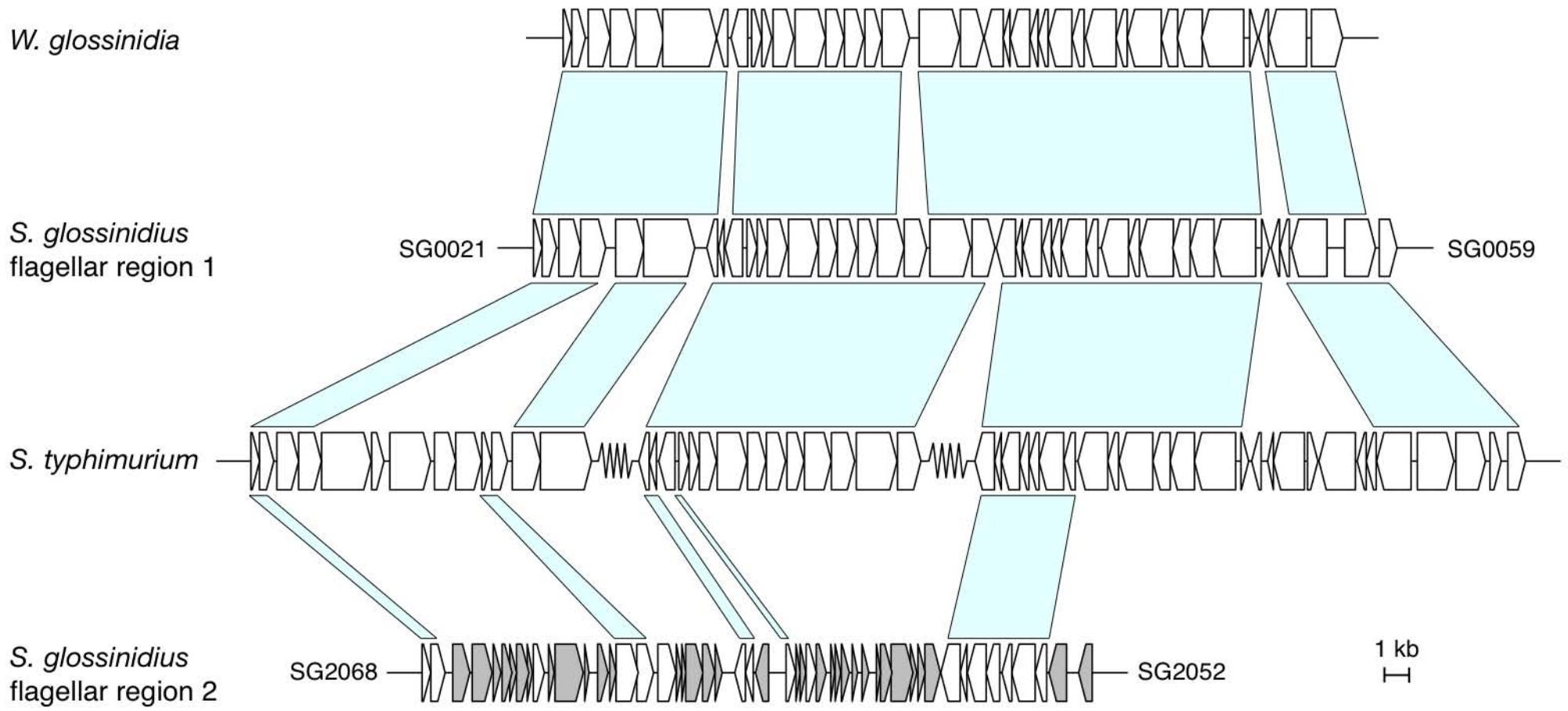


Supplemental Figure 2.

Percentage of CDSs and pseudogenes in *Sodalis*



Supplemental Figure 3.



Supplemental Figure 4.