

Acceptor Stem

D Stem

Anticodon Stem

TΨC Stem

<i>Phe: S.cerevisiae REF</i>	GCGGAUU	UA	GCUC	AGUU-GG-G-A	GAGC	G	CCAGA	CU (GAA) GA	UCUG-G	AGGUC	CUGUG	UUCGAUC	CACAG	AAUUCGC	ACCA
<i>Ala: Thp.tenax</i>	.G.CCGG	..	.UCU	..C---A-	.GA.	..	.C.C	..(UGC).C	G.G.-.	..A..	.C.G.	.....AU	.C.G.	CCGGUC.	.~~~
<i>Ala: Sp.oleracea</i>	.G....A	..	.....	.....-U-	.....	..	.GCU	..(UGC)AU	GGC.-.	.U...	AGCG.	.....GU	.CGCU	U..CUC.	.~~~
<i>Ala: S.cerevisiae</i>	.G.CG.G	.G	..GU	..C--U-	.C..	..	.UCCC	U.(AGC)AU	GGGA-	.....	UCCG.	.....U	.CGGA	CUCGUC.	....
<i>Arg: Sp.oleracea</i>	..UCCA	..	.UCU	.A---AU-	.GA.	A	UAG.U	..(UCU)A.	A.CU-U	U.-U	A.AG.	..A.AA	.CU.U	UGGA...	.~~~
<i>Arg: S.cerevisiae</i>	UUCUCG	.G	..C.	.A---UC-	CG..	..	U.U.G	..(ACG)A.	C.A-A	..A.U	.CAG.	..A.GU	.CUG.	CGGGGA	G...
<i>Asn: S.cerevisiae</i>	.ACUCCA	.G	..CA	.....UU-	AG..	..	UGC..	..(UU)A.	..GC-A	..A..	G..A.	..A.C.	.U..C	UGGGU.	G...
<i>Asp: Sp.oleracea</i>	.G.AU.G	..	.U..	.A---UU-	.....	A	.GCC	..(UC)A.	GGC.-.	.A.CU	GC.G.	.....G.	.C.GU	C.G..C.	G~~~
<i>Asp: S.cerevisiae</i>	U.C.UGA	..	.U.U	.A---UC-	..AU	.	GGC.C	U.(UC).C	GUGC-C	..A-U	.G.G.	..A..U	.C.C.	UCGCG.A	G...
<i>Cys: Sp.oleracea</i>	.GC.GCA	.G	..CG	...--U--	AG..	..	GAG..	..(C.)A.	..CU-U	GUU-	.CCA.	..A.AU	.CGG.	UG.CG.C	U~~~
<i>Cys: S.cerevisiae</i>	..UCG.A	.G	..G.	...--U--	.C..	A	G.....	U.(C.)A.	...-U	U....	..UA.	.....	.UG..	UGCGA..	U...
<i>MetI: Thp.tenax</i>	AGC.GGG	..	.GC.	..CCA.U--	.GC.	..	.GG.G	..(C.U)AG	C.CC-	.....	.C.G.	..A.AU	.C.G.	CCCCGCU	.~~~
<i>MetI: Sp.oleracea</i>	CGC.GGG	..	.AG.	...U..U--	.CU.	..	.A..G	..(C.U)A.	C..U-	.....	AC.G.	..A.AU	.CUGU	CUCCGCA	....
<i>Glu: Sp.oleracea</i>	..CCCCA	.C	.UCU	..C--UUC	.GA.	A	U.UC	..(UUC)A.	GGA-A	CAA-	GG.GA	.....CU	UC.CC	UGGGU.U	.~~~
<i>Glu: S.cerevisiae</i>	U.C...A	..	.UGU	.AC--CU-	UCA.	A	U..CG	..(UUC)AC	CG.-.	..A-	.G.G.	.....CU	.C.C.	U..CG.A	G...
<i>His: Sp.oleracea</i>	.....G	..	..CA	...--AUU	AG..	A	GUG..	U.(UG)A.	..CA-C	CAU..	GC.G.	..A..U	.C.GU	CG.....	C~~~
<i>Ile: Sp.oleracea</i>	..AUCCA	.G	..G	.A---UU-	A...	..	.CA.	..(C.U)A.	.UG.C.	.AU..	G.AG.	..A..U	.CU.C	UGGAU..	.~~~
<i>Ile: S.cerevisiae</i>	..UCG.G	..	.....	...--UU-	.....	U	U.GUG	..(U.U)A.	CGC.-A	CC...	G..G.	..A...	.C..C	CUCGA..	.~~~
<i>Lys: S.cerevisiae</i>	U.CUUG.	..	.....	...--U--	.....	U	UUC.G	..(UU)A.	C.GA-A	.U...	AG.G.	.....G.	.C.CU	.UGAG.A	G...
<i>Met: Sp.oleracea</i>	A.CU.C.	..	A...	..C--UU-	..U	A	UUGC	U.(C.U)AC	GGC.-.	GA...	A.UG.	..A.AU	.CA.U	.G.AG.U	.~~~
<i>Phe: Ag.quadruplicatum</i>	..CAGGA	..	..N.	...--U--	.....	A	GAG..	..(..).A.	..CU-C	GU...	GGCG.	..A..U	.CGCC	UCCCG..	....
<i>Phe: Sp.oleracea</i>	.UC.GGA	..	.....	..C--U--	.....	A	GAG..	..(..).A.	..CU-C	GU...	ACCA.	..A.AU	.UGGU	UCC.G..	....
<i>Phe: S.cerevisiae</i>	.....	..	.....	...-G--	.....	..	.....	..(..).A.	.....	.....	.....	.....	.....	.....	.~~~
<i>Phe: Bos taurus</i>	..C..AA	..	.....	...-G--	.....	..	UU...	..(..).A.	..A-A	.....	.CUG.	..A...	.CGG.	UU.CG..	....
<i>Pro: Sp.oleracea</i>	AG...G	..	N.G.	.C.U..U--	.C..	U	UUU.U	U.(NGG)NU	A.AA-A	.U...	AC.G.	..A.AU	.CUGU	C..C.CU	....
<i>Thr: Sp.oleracea</i>	..CCC..	..	A...	...--U--	..U	A	A.GCC	A.(GU)A.	GGC.-U	.A..	A.CG.	..A.AU	.CG.U	..GGG..	U~~~
<i>Thr: S.cerevisiae</i>	..UUC.A	.G	..CA	...--U--	AG..	..	..C.	..(AGU)A.	.G.-.	..A..	A.CG.	..A.AU	.CG.U	UGGAA..	....
<i>Trp: Sp.oleracea</i>	..CUC.	..	.U..	...C..U--	..A.	..	UGG.U	..(CC.)N.	A.CC-	.U.N.	G.AG.	..A.GU	.CU.C	.GAG..U	G...
<i>Tyr: S.cerevisiae</i>	CUCUCGG	..	..CA	...--UUU	AG..	..	.A...	..(U.)A.	..U-	..A..	GG.C.	.....CU	.G.CC	CCGGGAG	....
<i>Val: Sp.oleracea</i>	AG..G.A	..	A...	..C--U--	..U.	..	U..CC	U.(.C).U	GG.-.	.A...	A.CA.	.....G.	.UG.U	U..C.CU	.~~~
<i>Val: S.cerevisiae</i>	.GUUUCG	.G	.UCU	...C--UU-	UG..	A	U.U.C	U.(A.C)AC	G.A.-A	.C...	.CCA.	.....	.UGG.	CGAAAU.	....

"Diff" view of a tRNA alignment containing 30 sequences. The four helices in tRNA are boxed and labeled. Symbols: .: same nucleotide as reference sequence. -: deletion. ~: positions not sequenced. Position numbers refer to the reference sequence (*S.cerevisiae* Phe).