









Distribution of homologues of the T4 genes among T4 relatives (Page 5)

T4 gene or ORF	Presence ( # ), absence ( ) or uncertain presence ( ? ) of a T4-like ORF in														
	RB69	RB49	RB43	RB16	44RR	31	25	65	Aeh1	133	nt-1	KVP40	S-PM2	P-SSM2	P-SSM4
27	#	#	#	#	#	#	#			#					
28	#	#	#	#	#	#	#			#					
29	#	#			#	#	#			#					
48	#	#	#	#	#	#	#		#	#	#	#		#	#
54	#	#	#	#	#	#	#	#	#	#					
alt.-3	#														
alt.-2															
alt.-1															
alt	#	#	#	#	#	#	#		#	#					
alt.1	#														
30	#	#	#	#	#	#	#	#	#	#	#	#			
30.1	#														
30.2	#		#	#	#	#	#	#	#	#	#	#			
30.3	#	#	#	#	#	#	#	#	#	#	#	#			
30.4	#														
30.5															
30.6	#			#	#	#	#								
30.7	#														
30.8	#														
30.9	#				#	#	#	#							
rIII	#								#	#					
31	#	#	#	#	#	#	#	#	#	#	#	#			
31.1	#	#	#	#	#	#	#	#	#	#	#	#			
31.2	#														
cd	#	#	#	#	#	#	#	#	#	#	#	#			
cd.1															
cd.2	#														
cd.3	#														
cd.4	#														
cd.5															
pseT	#	#	#	#	#	#	#	#	#	#	#	#			
pseT.1	#														
pseT.2	#	#	#	#	#	#	#	#	#	#	#	#			
pseT.3	#	#	#	#	#	#	#	#	#	#	#	#			
alc	#				#	#	#	#		#					
rnIA	#	#	#	#	#	#	#	#	#	#	#	#			
denA	#	#	#	#	#	#	#	#	#	#	#	#			
nrdB	#	#	#	#	S(ORF111)	S(ORF111)	S(ORF111)	#	#	#	#	#	#	#	#
I-TevIII															
mobE									#						
nrdA	#	#	#	#	#	#	#	#	split	#	#	#	#	#	#
nrdA.1								#	#	#	#	#			
nrdA.2	#														
td	#	#	#	#	#	#	#	#	#	#	#	#		#	#
I-Tev I										#					
frd	#	#	#	#	#	#	#	#	#	#	#	#			

Distribution of homologues of the T4 genes among T4 relatives (Page 6)

T4 gene or ORF	Presence ( # ), absence ( ) or uncertain presence ( ? ) of a T4-like ORF in														
	RB69	RB49	RB43	RB16	44RR	31	25	65	Aeh1	133	nt-1	KVP40	S-PM2	P-SSM2	P-SSM4
<i>frd.1</i>	#		#	#				#							
<i>frd.2</i>	#	#													
<i>frd.3</i>	#														
<b>32</b>	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
<i>segG</i>															
<b>59</b>	#	#	#	#	#	#	#	#	#	#	#	#		#	#
<b>33</b>	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
<i>dsbA</i>	#	#	#	#	#	#	#	#	#	#	#	#			
<i>rnh</i>	#	#	#	#	#	#	#	#	#	#	#	#	#		
<b>34</b>	#	#	#	#	#	#	#	#	#	#	#	#	?	?	?
<b>35</b>	#	#	#	#	#	#	#	#	#	#	#	#	?	?	?
<b>36</b>	#	#	#	#	#	#	#	#	#	#	#	#	?	?	?
<b>37</b>	#	#	#	#											
<b>38</b>	**	**	**	**									?	?	?
<i>t</i>	#	#	#	#	#	#	#			#					
<i>asiA</i>	#				#	#	#	#	#						
<i>asiA.1</i>	#														
<i>arn</i>															
<i>arn.1</i>	#														
<i>arn.2</i>	#														
<i>arn.3</i>	#									#	#	#			
<i>arn.4</i>	#														
<i>motA</i>	#				#	#	#			#					
<i>motA.1</i>															
<b>52</b>	#	#	#	#	#	#	#	#	#	#	#	#			
<b>52.1</b>	#														
<b>52.2=ac</b>															
<b>52.3=stp</b>															
<i>ndd</i>	#		#	#	#	#	#	#	#	#					
<i>ndd.1</i>	#														
<i>ndd.2</i>															
<i>ndd.2a</i>								#							
<i>ndd.3</i>															
<i>ndd.4</i>															
<i>ndd.5</i>															
<i>ndd.6</i>															
<i>denB</i>	#									#					
<i>denB.1</i>															
<i>rIIB</i>	#	#	<i>rIIA+B</i>	<i>rIIA+B</i>	#	#	#	#	#	#	#	#			

Footnote to Supplementary Table.

The T4 genes<sup>1</sup> highlighted in red have homologues in all of the phages listed here.

The following T4 genes or putative genes are not listed: 8 tRNA and 2 tRNA-like (*rnaC*, *rnaD*) genes, ORFs, 17'A, 17'B, 17'', 21', 30.3' and 49' (which are overlapping with ORFs bearing the same numerical designations), *repEA* and *repEB* (which are internal and antisense to T4 *gene 5*). Also, recent corrections in the T4 genome sequence showed that *nrdB.1* is part of the *mobE* reading frame<sup>2</sup> and that *uvsW.1* is an ORF separate from the *uvsW* reading frame<sup>3</sup>.

# = homologue has been detected; blank = no homologue has been detected.

? = These ORFs appear to be analogous rather than homologous to the functional counterparts (genes 34, 35, 36 and 37) of the T-even phages.

\*\*\* = All of these ORFs exhibit similarities to T2 g38 rather than T4 g38.

*S(dut)*, *S(ORF109)* and *S(ORF111)* refer to putative substitutions with host-like ORFs.

1. Miller, E. S., Kutter, E., Mosig, G., Arisaka, F., Kunisawa, T. & Ruger, W. (2003). Bacteriophage T4 Genome. *Microbiol Mol Biol Rev* 67, 86-156.
2. Sandegren, L. & Sjoberg, B. M. (2004). Distribution, sequence homology, and homing of group I introns among T-even-like bacteriophages: evidence for recent transfer of old introns. *J Biol Chem* 279, 2218-27.
3. Sickmier, E. A., Kreuzer, K. N. & White, S. W. (2004). The crystal structure of the UvsW helicase from bacteriophage T4. *Structure* 12, 583-92.