

Table 1. Mechanism of resistance for characterized *tet* and *otr* genes. Modified April 20, 2021

Originally modified from MMBR 2001. 65; 232-260 with permission from ASM Journals [n=63 genes + 11 mosaic genes]

Efflux (36)	Ribosomal Protection (13)	Enzymatic (13)	Unknown ^a
<i>tet</i> (A), <i>tet</i> (B), <i>tet</i> (C), <i>tet</i> (D), <i>tet</i> (E), <i>tet</i> (59) ⁱ	<i>tet</i> (M), <i>tet</i> (O), <i>tet</i> (S), <i>tet</i> (W), <i>tet</i> (32),	<i>tet</i> (X) ^{c,q}	<i>tet</i> (U)
<i>tet</i> (G), <i>tet</i> (H), <i>tet</i> (J), <i>tet</i> (V), <i>tet</i> (Y)	<i>tet</i> (Q), <i>tet</i> (T), <i>tet</i> (36), <i>tet</i> (61) ⁿ	<i>tet</i> (37) ^c	
<i>tet</i> (Z), <i>tet</i> (30), <i>tet</i> (31), <i>tet</i> (33), <i>tet</i> (57) ^g	<i>otr</i> (A), <i>tet</i> B(P) ^b , <i>tet</i>	<i>tet</i> (34)	
<i>tet</i> (35) ^d	<i>tet</i> (44)	<i>tet</i> (47) ^j , <i>tet</i> (48) ^j , <i>tet</i> (49) ^j , <i>tet</i> (50) ^j	
<i>tet</i> (39), <i>tet</i> (41)		<i>tet</i> (51) ^j , <i>tet</i> (52) ^j , <i>tet</i> (53) ^j , <i>tet</i> (54) ^j	
<i>tet</i> (K), <i>tet</i> (L), <i>tet</i> (38), <i>tet</i> (45) ^e , <i>tet</i> (58) ^h , <i>tet</i> (63) ^o		<i>tet</i> (55) ^j , <i>tet</i> (56) ^j	
<i>tet</i> A(P), <i>tet</i> (40)			
<i>otr</i> (B), <i>otr</i> (C)			
<i>tcr3</i>			
<i>tet</i> (42)	Mosaic Ribosomal Protection (11)		
<i>tet</i> (43)	<i>tet</i> (O/32/O), <i>tet</i> (O/W/32/O), <i>tet</i> (O/32/O		
<i>tet</i> AB(46) ^f	<i>tet</i> (O/W/32/O/W/O), <i>tet</i> (W/32/O), <i>tet</i> (O/W)		
<i>tet</i> AB(60) ^k	<i>tet</i> (W/32/O/W/O), <i>tet</i> (O/W/O), <i>tet</i> (O/W/32/O) ^o		
<i>tet</i> (62) ^p	<i>tet</i> (S/M), <i>tet</i> (W/N/W)		
<i>tet</i> (64) ^s			

blue new information

^a*tet* (U) has been sequenced but does not appear to be related to either efflux or ribosomal protection proteins

^b*tetB*(P) is not found alone and *tetA*(P) and *tetB*(P) are counted as one operon;

^c*tet*(X) and *tet*(37) are unrelated but both are NADP-requiring oxidoreductases: *tet*(34) similar to the xanthine-guanine phosphoribosyl transferase genes of *V. cholerae*; ^dNot related to other *tet* efflux genes; *tet*(40) & *tet*(41) App En Micro 2007; 73:2199; *tet*(42) AAC 52:4518; *tet*(43) from metagenomic; *tet*(44) AAC press 2010; ^eYou et al, JAC 2013 68:1962; ^frepresenting 2 different genes Warburton et al., JAC 2013

68:17 [two genes needed for resistance *tetAB*(46)]; ^gDr. Huang et al., 2015, J Food Protect 8:1428, **originally listed as *tet*(47)**;

^hDr. Kyselkova originally listed as *tet*(48); ^jForsberg et al., 2015 Chemistry & Biology 22:888;

^kRoberts et al. representing 2 different genes both needed for resistance;

^lPatterson et al., 51:1115 AAC 2007; ⁿ*tet*(61) on same plasmid as *tet*(58);

^o**Zhu, Wang Schwarz et al. JAC 2021 76:576-581 doi:10.1093/jac/dkaa485;**

^p**McGivern, McDonell, Morris et al., Plasmid 2021 <https://doi.org/10.1016/j.plasmid.2021.102563> waste water;**

^q**Some groups have used alleles for *tet*(X). We do not recommend this because many of the alleles are 85-100% aa identical and the same genes has previously been listed as *tet*(X) in GenBank. So there are the same genes with two different names which is confusing. We would recommend that everyone uses just *tet*(X) and Tet(X) in the future. Also there are many uncultured bacteria with the *tet*(X) gene, as well as anaerobic bacteria where the *tet*(X) does not function.**

^r**Zhang, Dong, Shen et al., Nature communications 2020 11:4648 <https://doi.org/10.1038/s41467-020-18475-9>;**

^s**Somprasong, Hall, Webb et al., AAC 2021 65:e01767-20 <https://doi.org/10.1128/AAC.01767-20>**