

Рис. 16. Классическая аттенуаторная регуляция гена *trpE* у γ -протеобактерий. Обозначения такие же, как на рисунке 4. Дубликации регуляторной области гена *trpE* помечены #.

SKA_trpE AUGUUACAGCAAUUCAAAAUCAACAAUGCGUUUUUCUCAAUAAUUGGUGGUGGCACUCCUACUACGGGCAGUGUGAAUAGCUGUAAUUCAG*****CAAUAUAACAACGAGCCCGCAUCAAA*****UGCGGGCUUUUUUA
PBPR_trpE AUGUUACAGCAAUUACCGACAGCUUCGCGCUUUUCUUAUCUCAUGGUGGUGGCACUUCUCUUAACGGGUUGUGUGAUUUGCUGUUCUAAAC*****GGACAGAAUAGACAUAGGCCCGCCAGA*****UGCGGGCUUUUCA
SO_trpE AUGACUCAGAUUAACGCUUCUUCUUAACAUCUUAUGGUGGUGGCACUUCUCCAAACUAGCGGGUAGUGUGAAGCUCUGUGUCA*****UUUGAAAGUAAACAGAAUCAACAGAAAAGCCCGCAGAAA*****UGCGGGCUUUUUUG
Sbal_trpE AUGACACACAUUAACGCUUCAUUAACAUCUUAUGGUGGUGGCACUUCUCCAAACUAGCGGGUUGUGUGAAGCUCUGUGUCA*****UUUGAAAGUGACCAGAAUCAACAGAAAAGCCCGCAGAAA*****UGCGGGCUUUUUUG
Sput_trpE AUGACCCACAUUAACGCUUCAUUAACAUCUUAUGGUGGUGGCACUUCUCCAAACUAGCGGGUUGUGUGAAGCUCUGUGUCA*****UUUGAAAGUGACCAGAAUCAACAGAAAAGCCCGCAGAAA*****UGCGGGCUUUUUUG
Sputw_trpE AUGACCCACAUUAACGCUUCAUUAACAUCUUAUGGUGGUGGCACUUCUCCAAACUAGCGGGUUGUGUGAAGCUCUGUGUCA*****UUUGAAAGUGACCAGAAUCAACAGAAAAGCCCGCAGAAA*****UGCGGGCUUUUUUG
Spea_trpE AUGACACAGUUAACAACUUCUCAAACAUCUUAUGGUGGUGGCACUUCUCCAAAUAGCGGGUUGUGUGAAGCUCUGUGUCA*****GAAAACUGAGACAGAUAUCAACAGAAAAGCCCGCAUACA*****UGCGGGCUUUUCUUG
Shew_trpE AUGACGACGACGUAUUAACAACAUCUUAUGGUGGUGGCACUUCUCCAAACAAGCGGGUUGUGUGAAUUCUGUGUCA*****UGUAAAAGAGACAAGAUAUUAACAAGAAAAGCCCGCACUCG*****AUGCGGGCUUUUUGC
Ssed_trpE AUGAACACAUUUUCAAGCACAACAUCUUAUGGUGGUGGCACUUCUCCAAACUAGCGGGUUGUGUGAAGCUCUGUGUCA*****UGUAAAAGAGACAAGAUAUCAACAAUAGGCCCGCAUAGA*****AUGCGGGCUUUUUUG
Swoo_trpE AUGAACAUUUUUUCUCAAAGCACAACAUCUUAUGGUGGUGGCACUUCUCCAAACUAGCGGGUUGUGUGAAGCUCUGUGUCA*****UGUAAAAGAGACAAGAUAUCAACAAUAGGCCCGCAUAGA*****AUGCGGGCUUUUUUG
Sfri_trpE AUGACACACUCUUAGCUUCAUUAACAUCUUAUGGUGGUGGCACUUCUCCAAAUAGCGGGUUGUGUGAAGCUCUGUGUCA*****UUUUUAAGAGACAAGAUAUUUACCAAAGGCCCGCAGAGA*****UGUGGGCUUUUCUUG
Sden_trpE AUGACACACUCAACGCAUUAACAUCUUAUGGUGGUGGCACUUCUCCAAACUAGCGGGUUGUGUGAAGCUCUGUGUCA*****AUUGACACAAGAUAUUAUCAAGAAAAGCCCGCACCU*****AUGCGGGCUUUUUUG
Sama_trpE AUGACCCCAUUCUUCUUAACAUCUUAUGGUGGUGGCACUUCUCCAAACUAGCGGGUUGUGUGAAGCUCUGUGUCA*****UUUAACAGACACAAGAUAUCAACAAUAGAAAAGCCCGCACUA*****UGCGGGCUUUUUUG
ASA_trpE AUGCAAACGACUUCUACUCCUGACCAUCUGGUGGUGGCACACUCCUGACAUGCGGGUGUGUGUGCUGUUAUC*****UGUAAUCUGACAGCAAUAAGAACCACAAAGAAAAGCCCGCUGACCC*****CAGCGGGCUUUUUUA
AHA_trpE AUGCAAACGACUUCUACUCCUGACCAUCUGGUGGUGGCACACUCCUGACAUGCGGGUGUGUGUGCUGUUAUC*****UGUAAUCUGACAGCAAUAAGAACCACAAAGAAAAGCCCGCUGACCC*****CAGCGGGCUUUUUUA
CPS_trpE AUGAACACAGCAAUAACAUCUUAUGGUGGUGGCACUUCUCCAAACUAGCGGGUUGUGUGAAGCUCUGUGUCA*****UUUUAAGAGACAAGAUAUUUACCAAAGGCCCGCAGAGA*****UGUGGGCUUUUCUUG
SFV_trpE AUGAAAAGCAAUUUCUGUACUGAAGAGUUGGUGGC*GCACUUC**UGAAAACGGGCAGUGUAUUCACCGUGUAAA*****GCAAUCAGUACCCAGCCCGCUAAU*****GAGCGGGCUUUUUUA
SbBS512_trpE AUGAAAAGCAAUUUCUGUACUGAAGAGUUGGUGGC*GCACUUC**UGAAAACGGGCAGUGUAUUCACCAUGCGUAAA*****GCAAUCAGUACCCAGCCCGCUAAU*****GAGCGGGCUUUUUUA
SSON_trpE AUGAAAAGCAAUUUCUGUACUGAAGAGUUGGUGGC*GCACUUC**UGAAAACGGGCAGUGUAUUCACCAUGCGUAAA*****GCAAUCAGUACCCAGCCCGCUAAU*****GAGCGGGCUUUUUUA
SDY_trpE AUGAAAAGCAAUUUCUGUACUGAAGAGUUGGUGGC*GCACUUC**UGAAAACGGGCAGUGUAUUCACCAUGCGUAAA*****GCAAUCAGUACCCAGCCCGCUAAU*****GAGCGGGCUUUUUUA
CKO_trpE AUGAAAAGCAAUUUCUGUACUGAAGAGUUGGUGGC*GCACUUC**UGAAAACGGGCAGUGUAUUCACCAUGCGUAAA*****GCAAUCAGUACCCAGCCCGCUAAU*****GAGCGGGCUUUUUUA
Ent_trpE AUGAAAAGCAAUUUCUGUACUGAAGAGUUGGUGGC*GCACUUC**UGAAAACGGGCAGUGUAUUCACCAUGCGUAAA*****GCAAUCAGUACCCAGCCCGCUAAU*****GAGCGGGCUUUUUUA
ESA_trpE AUGACUCACAUUUUUUCUGCAUGGCUGGUGGC*GUACUUC**UGAUCUCCGGGCGGUGUUCUACCGU*****GAGGCAUCGCGCAAGGGCGUGGAUG*****AACUGGGCGUUUGCU
PE36_trpE AUGCAAAUUAUACAAACCAACAUCAGUUGGUGGUGGCACUUCUCCUACUAAAACGGGCAUGUGUAUUUGUGAUAUCUGCAGUAAAUGUAAAUCUACAAAUAUAUAACAUAUAAAGCCCGUUUCU*****GAAACGGGGCUUUUUUA
IL_trpE AUGUUUUUACGCAACAACAACAUCUUGGUGGUGGCACUUCUCCAAACGAGCGGGUGUGUGAUGUGCGUGUAACG*****AAUUAUGCUUACUUUGAGAAACCCCGUCUU*****GAGCGGGCUUUUUUA
OS_trpE AUGCAACUUCUUAUCUUAACAACAUCUUGGUGGUGGCACUUCUCCAAAUAGCGGGUUGUGUGAAGCUCUGUGUCA*****UAAAUAUGCGGGCAUUAUCUUAACAUAUAAAGCCCGCUAAU*****UGCGGGCUUUUUUA
Pat1_trpE AUGAAUACAGUUAUACGCGUUUAACAUCUUAUUGGUGGUGGCACAUCCUUAACUAGCGGGUGUGAGCGUAUGUUAUUGUG*****CGAUUGAACAGAAAAGCCCGUAUAA*****UACGGGGCUUUUUUA
PSHAa_trpE AUGAACAAUUCUACUUUAACAUCUUAUGGUGGUGGCACUUCUCCUUAACUAGCGGGUGUGAGCGUAUGUUAUUGUG*****AAUUAUUCUAAACCCCGCAACU*****UGCGGGCUUUUUUA
PTD2_trpE#1 AUGAAUACUCUAGUUAACAACAUCUUAUGGUGGUGGCACUUCUCCAAACGAGCGGGUGUGUGAUGUGUGU*****AAACAGUUUUUAACCCCGCUU*****UGCGGGCUUUUUUA
PTD2_trpE#2 AUGAAUAAUCUUAUUAACAACAUCUUGGUGGUGGCACUUCUCCUUAUAGCGGGUUGUGUGAAGCUCUUAACA*****UAGUUUUUCAGCCCGCUU*****UAGCGGGCUUUUUUA
MADE_trpE AUGCAUCCUUAACAUCUCAAAGUAUUAACAUGUGCAGCUGGUGGUGGCACUUCUCCUUAACUAAAACGGGCGGUGUGCAGUGUGCGUG*****AAUGAAAACACAUAAGGCCCGUUUA*****UACGGGGCUUUUUUA
ATW7_trpE#1 AUGAACAAUUCUAAACCUUAACAACAUCUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUAGUAUUAUGUGUGUGUGACAA*****AAUUAUUCUAAACCCCGCAAAU*****UGCGGGCUUUUUUA
ATW7_trpE#2 AUGAAUACGGUUAUUAACAACAUCUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGCAAGUAUUAUGUGUGU*****AGAAUUCGUUAUUCUAAACCCCGCACUGCACGCAUUGCGGGUU*****
EeE_trpE AUGAAAAGCAAUUUCUGUACUGAAGAGUUGGUGGUGGCACUUCUCCUUAACUUAAGCGGGUGUGAUAUUCACCAUGUGU*****AGCAAUCAGAUUACCCAGCCCGCUAAU*****UAGCGGGCUUUUUUA
t_trpE AUGGCAGCGACAUUUGCAUUAACCGUUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****CAGCCAAACGAUACCCGCCCUGUUA*****UAGCGGGCUUUUUUA
STY_trpE AUGGCAGCGACAUUUGCAUUAACCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****CAGCCAAACGAUACCCGCCCUGUUA*****UAGCGGGCUUUUUUA
STM_trpE AUGGCAGCGACAUUUGCAUUAACCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****CAGCCAAACGAUACCCGCCCUGUUA*****UAGCGGGCUUUUUUA
KPN_trpE AUGCAACUUAUCACUCUGACAGCUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****UUCAGCAUAUACAGUACCCGCCCUGUUA*****UAGCGGGCUUUUUUA
Ping_trpE AUGAUUUUAACAACAUAUUCUUAUUAUGAUUAUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****AAUUAUUCUCAAACAACAUAUUAUUAUUGU*****UAGCGGGCUUUUUUA
PCNPT3_trpE AUGAUUUUAUUAACAUAUUCUUAUUAUGAUUAUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****AAUUAUUCUCAAACAACAUAUUAUUAUUGU*****UAGCGGGCUUUUUUA
Spro_trpE AUGAAUUAAGCAAUCUUCUUCUGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****GACACUGCAGAUUCCUUAAGCCCGCUU*****AACCGGGCUUUUUUA
ECA_trpE AUGAAUUAAGCAAUCUUCUUCUGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****GACACUGCAGAUUCCUUAAGCCCGCUU*****UAGCGGGCUUUUUUA
YPN_trpE AUGAAGACUUCUUGAUUUCUUAACUGCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****GACAGUGCAGAUUUGCUUACGCCCGCUAA*****UAGCGGGCUUUUUUA
YberA_trpE AUGAAAACCAUCUUGAUUCCUUAACUGCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****GACAGUGCAGAUUUGCUUACGCCCGCUAA*****UAGCGGGCUUUUUUA
YE_trpE AUGAAAACUUCUUAUUCUUAACUGCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****GACAGUGCAGAUUUGCUUACGCCCGCUAA*****UAGCGGGCUUUUUUA
YintA_trpE AUGAAAACUUCUUGAUUUCUUAACUGCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****GACAGUGCAGAUUUGCUUACGCCCGCUAA*****UAGCGGGCUUUUUUA
YfreA_trpE AUGAAAACUUCUUGAUUUCUUAACUGCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****GACAGUGCAGAUUUGCUUACGCCCGCUAA*****UAGCGGGCUUUUUUA
Ymol_trpE AUGAACAGAUUCUGAUCUUCUUAACUGCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****GACAGUGCAGAUUUGCUUACGCCCGCUAA*****UAGCGGGCUUUUUUA
YpsIP_trpE AUGAAAACUUCUUGAUUUCUUAACUGCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****GACAGUGCAGAUUUGCUUACGCCCGCUAA*****UAGCGGGCUUUUUUA
plu_trpE AUGACGUUAUUCUUAACUGCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****GUGCCAAUUAUACAAAGCCCGCUAA*****UAGCGGGCUUUUUUA
SG_trpE AUGCUUCGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****UAGCGGGUGUGAUAUUCGUGUGUAAU*****GACAGAGCAGAUCCCAAUAGCCCGCUGCGU*****UAGCGGGCUUUUUUA
VAS14_trpE AUGUUACAGCAAUUCAAAAUCAACAAGCGUUUUUCUCAAUAAUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****AAUUGCAACAGGCCCGCUAA*****UAGCGGGCUUUUUUA
VIBHAR_trpE AUGAAUUCUGCAGAUUUGCUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****AGAGAAUUAUUAUGUACAAAGGCCCGCUACCU*****CAGCGGGCUUUUUUA
VSAK1_trpE AUGGUUAUUCUUAACUGCAUUAACUGCGUUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****AAUUAUUCUCAAACAACAUAUUAUUAUUGU*****UAGCGGGCUUUUUUA
VF_trpE2 AUGUCACAGCUUAACAGACAACAAGCAAUCUUAACAACAUCAGUGGUAAGCUCACGAUGGUGGUGGCACUUCUCCUUAACUUAUUCGGGUGUGAUGAACAGCUGUAAU*****UUCUAAUUAUUAUUAUUAUUAUUAU*****UAGCGGGCUUUUUUA
VC_trpE AAAGCGAAACUUGCUCUGCAUUAUUCAGUCCAGCGGAGUGCGAUCUGGUGGUGGCACUUCGGAAGUUCUUGGUGGUGGCACUUCGUGAUAUUCUUAAGUUU*****AGAUUUCACACACCUAGCCCGCUAA*****UAGCGGGCUUUUUUA
VV_trpE AAAGCGAAACUUGCUCUGCAUUAACGAGAAUGCAUUAAGCAGAGCAGCUGGUGGUGGCACUUCGGAAGUUCUUGGUGGUGGCACUUCGUGAUAUUCUUAAGUUU*****AGAAAUAUUAUUAUUAUUAUUAU*****AUUGCGGGCUUUUUUA
VP_trpE AAAGCGAAAGUUGCUGUUUGCUUAUUAAGACAACAACAUCAGAUUUCUGGUGGUGGCACUUCGGAAGUUCUUGGUGGUGGCACUUCGUGAUAUUCUUAAGUUU*****AGAAAUAUUAUUAUUAUUAUUAU*****AUUGCGGGCUUUUUUA
VEx2w_trpE AAAGCGAAAGUUGCUGUUUGCUUAUUAAGACAACAUCAGAUUUCUGGUGGUGGCACUUCGGAAGUUCUUGGUGGUGGCACUUCGUGAUAUUCUUAAGUUU*****AUAGAACCAACGUUGUAAAGGCCCGCUACUU*****AAGCGGGCUUUUUUA
V12G01_trpE AAAGCGAAAGUUGCUGUUUGCUUAUUAAGACAACAUCAGAUUUCUGGUGGUGGCACUUCGGAAGUUCUUGGUGGUGGCACUUCGUGAUAUUCUUAAGUUU*****AUAGAACCAACGUUGUAAAGGCCCGCUACUU*****AAGCGGGCUUUUUUA
V12B01_trpE AAAGAUAAAGUUUAAGAUUUCUCAAUUAAGACAACAUCAGAUUUCUGGUGGUGGCACUUCGGAAGUUCUUGGUGGUGGCACUUCGUGAUAUUCUUAAGUUU*****AACAGUUUUUAUUAUUAUUAUUAU*****UAGCGGGCUUUUUUA
VSWAT3_trpE AAAGAUAAAGUUUAAGAUUUCUCAAUUAAGACAACAUCAGAUUUCUGGUGGUGGCACUUCGGAAGUUCUUGGUGGUGGCACUUCGUGAUAUUCUUAAGUUU*****AACAGUUUUUAUUAUUAUUAUUAU*****UAGCGGGCUUUUUUA