BACTERIAL SECRETION SYSTEM Type VI Type I Type III Type II Type Va Vc Type IV Intracellular toxins Cholera toxin, Exotoxin A Heat-labile (LT) toxin Cell wall-degrading enzymes RTX toxins HlyA, RtxA Proteases Effector proteins Needle proteins Components of the translocon YopB, YopD, LcrV Effector proteins DNA DNA-protein complexes Effector proteins Adhesins, proteases, toxins. Effector proteins Lipases S-layer proteins Host cell Host cell $T_{\text{(grG)}}$ Plasma Plasma membrane membrane T-pilus <mark>YscF</mark> Ysc⊕PX VirB⊉ Extracellular ∦irB3, milieu $(Y_{sc}W)$ Outer membrane TolC GspD VirB7, 9 Lip VirB1 $GspQ_{z}$ Periplasm [dspGHIJK HlyD VirB6, 8, 10 IcmF, DotU Twin arginine targeting (Tat) Sec-SRP YscJ SecDEFGY YajCYidC Inner GspFLM HlyB TatABCE ClpV PpkA membrane VirB4(VirB11 |VirD4 YscVURTS (GspO)∫FtsY Fha1 YscN (YscQL)GspE SecA) Bacterial cytoplasm PppA ၜ 0 ၜ ကြား 0 0 ATP ATP ATP ATP ATP ATP ATP ATP ffh SecB Type VI Type IV Type III Type I Type II Type Va Vb Vc Outer membrane protein [Needle K0322T OMP | W14028A K12341 Periplasmic protein Secreted substrate Secretin K04059 511016 ¥631972 Membrane fusion protein K04057 OMP Surface/pilus protein TK031983 ₩**0320**05 K11903 Y K12342/(₹K03**20**27 IMP OMP ₩03**20**4) K11906 ABC transporter OMP Secretin K03219 K02456 OMP TK04058 K02459 IMP ₩03**20**16 TK032035 IMP K11891 K11892 (KO245/H K02458 VK931910 Inner membrane protein (IMP) K03227 ATPase T/K03196 1 TK032054 K02460 ATPase K03230T ATPase Regulatory protein **K11**913 Leaderpeptidase K03224J ATPase Sec-SRP Twin arginine targeting (Tat) IMP KATE KATE KATE IMP SK03073/F K03073 K03075 K03210 K03217 ATPase Secretion monitor SRP receptor Targeting protein 5000B

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