

Figure S7

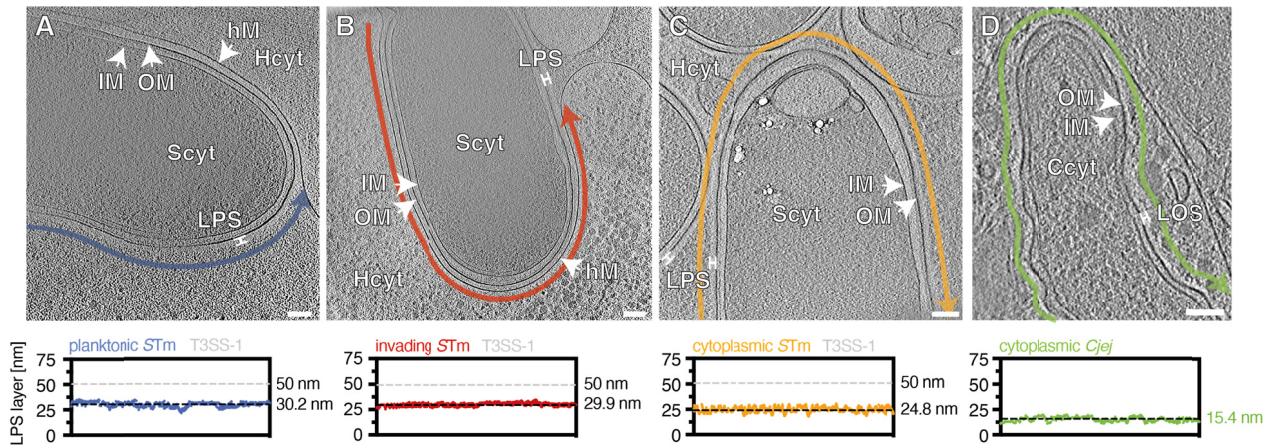


Figure S7. LPS represents a physical barrier between bacteria and their environment. (A, B) The LPS layer of (A) planktonic (~30 nm; blue) or (B) invading *S. Typhimurium* (~30 nm; red) is shorter than the recently reported length of its T3SS-1 needle (~50 nm, Park *et al.* (2018) *eLife* 7: e39514; indicated as grey line, lower panels), allowing the needle to contact the host cell membrane and secrete effector proteins into the host cell cytosol. (C) Intracellular *S. Typhimurium* adapts the length of its LPSs (~25 nm; yellow) in order to avoid immune recognition. (D) In comparison, LOS in *C. jejuni* was significantly shorter (~15 nm; green) than LPS of intracellular *L. pneumophila* (~25 nm; see Fig. 5) and *S. Typhimurium* (25-30 nm; A-C). Shown are (A, B) 8 nm (whole cells) and (C, D) 12 nm (cryoFIB-processed lamellae) tomographic slices of cryotomograms. One tomogram was used for the quantification of the LPS layer as a representative of the population. Blue, red, yellow and green arrows (upper panels) indicate the path along which the thickness of the LPS layer was quantified. OM, outer membrane; IM, inner membrane; hM, host cell membrane; Scyt, *S. Typhimurium* cytoplasm; Ccyt, *C. jejuni* cytoplasm; Hcyt, host cell cytoplasm; LPS, lipopolysaccharide; LOS, lipooligosaccharide; scale bars, 100 nm.