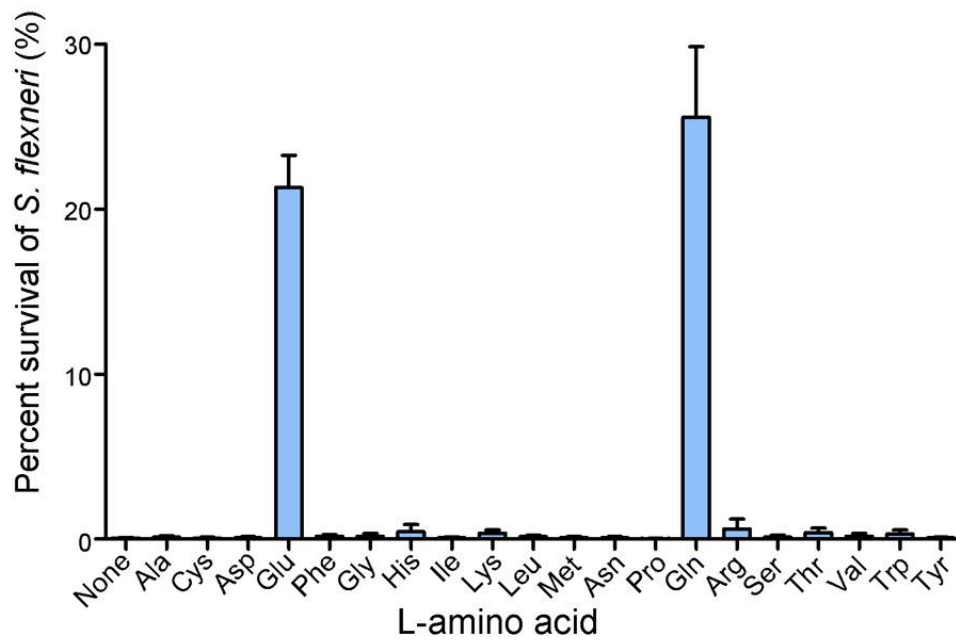




Supplementary information, Figure S1 L-glutamine markedly enhances survival of the Gram-negative bacterium *S. flexneri* at pH 2.5.

The experiments were performed as described in the Experimental Procedure. Only L-glutamate (Glu) and L-glutamine (Gln) provide strong resistance to the acidic shock. Approximately 22 and 25 percent of *S. flexneri* survived with Glu and Gln as the L-amino acid supplement, respectively. Survival percentage was below 0.5 for any other amino acid.