One-Step Enzymatic Modification of the Cell Surface Redirects Cellular Cytotoxicity and Parasite Tropism

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Supporting Information

Supplementary Table 1. Putative modified proteins.

List of type I proteins from yeast, *Toxoplasma*, human and mouse proteome that display an N-terminal glycine residue after potential enzymatic removal of a signal peptide or initiating methionine residue.

Supplementary Movie 1. Fibroblast invasion by sortagged *Toxoplasma gondii*.

Toxoplasma gondii tachyzoites were incubated with 500 μM TAMRA-LPETG and 20 μM sortase A for 15 minutes. Parasites were then washed and incubated with human foreskin fibroblasts. Scale bar: 10 micrometer.

Supporting Information Methods

Analysis of potential sortagged proteins

Canonical isoforms of single-pass type I membrane proteins were downloaded from UniProt (using ID "SL-9905") for human (n=1405), mouse (n=1151), and S. cerevisiae (n=50), including locations of predicted signal peptides (from 'signalp' (http://www.ncbi.nlm.nih.gov/pubmed/21959131)). For Toxoplasma gondii, all proteins were downloaded from ToxoDB for strain GT1, and single-pass type I membrane proteins (n=901) were identified using 'tmhmm' (http://www.ncbi.nlm.nih.gov/pubmed/11152613), followed by signal peptide prediction with 'signalp'. For all four species, we identified proteins containing glycine directly following the signal peptide (if present) or the initiating methionine.