

## Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: RTG-2 cells were incubated at room temperature for 1 h with 3  $\mu$ M SpHtp3<sup>21-211</sup>mRFP(His)<sub>6</sub> at pH 5.5. Subsequently, cells were washed extensively before challenging with *S. parasitica* cysts and a 3 h incubation. mRFP fluorescence and DIC were recorded for ~70 minutes by confocal microscopy. In total 70 frames were taken, each comprising a stack of 10 optical slices (zseries) to cover vesicles which would move to a different focal plane. A 3D(Z)-projection (sum of all 10 optical slices) of the mRFP fluorescence was made per frame. The corresponding movie is shown. The DIC channel corresponds to optical slice 6. SpHtp3<sup>21-211</sup>mRFP(His)<sub>6</sub> can clearly be detected within vesicles inside the cells and a reduction in red fluorescence/red vesicles can be observed in a cell being under attack by *S. parasitica* (see also Fig. 7b and c).