Supplementary Fig 1. Phylogenetic relationship of TgAPP with other known APPs. Alignment of the amino acid sequences of the APPs from apicomplexan parasites. Conserved amino acids are indicated by asterisks and dots in the alignment. The conserved C-terminal region is presented in blue. The substrate-binding site residues are marked in red;

Supplementary Fig2. Schematic diagram of the Cas9 control plasmid-TgAPP (pGCD-APP) expression construct. The TgAPP cleavage site is shown in its genomic context. The target guide RNA (gRNA) of TgAPP is underlined and the protospacer adjacent motif sequence is boxed. ToxoU6 promoter-based expression scheme for gRNA. This fragment bears all the components necessary for gRNA expression: ToxoU6 promoter (dashed line), TgAPP target sequence (framed), gRNA scaffold (underlined) and termination signal. TgAPP expression vector for Cas9 and single gRNA (sgRNA). The pGCD-APP expression plasmid contains four important genes: GFP, Cas9, TgAPP gRNA and dihydrofolate reductase (DHFR). The genes are represented by grey rectangles and their promoters (pro) are represented by arrows.

Supplementary Fig3. Flow cytometry analysis of the growth rate of TgAPP parasites. This is original data of Fig6D.