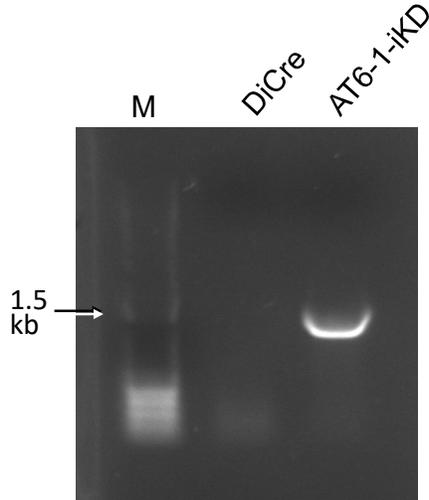
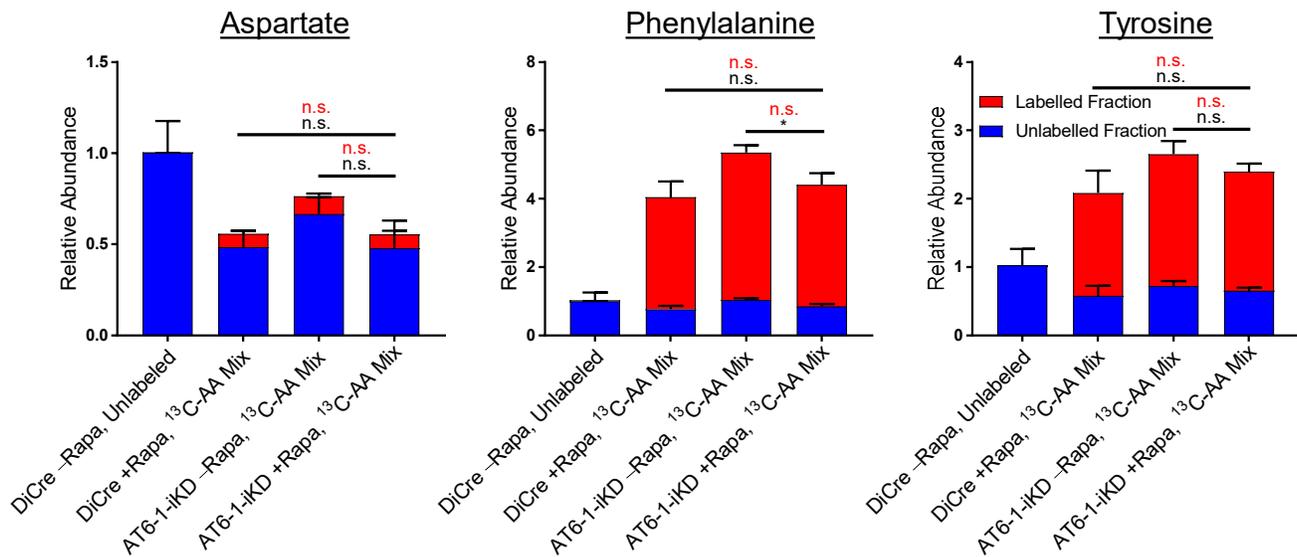


# Figure S1

(a)



(b)



**Figure S1.** Integration PCR and amino acid labeling. (a) A PCR was performed on genomic DNA extracted from DiCre and AT6-1-iKD parasites using primers that anneal in the AT6-1 locus and the HXGPRT resistance cassette, leading to a 1267 bp fragment in the successfully modified strain. (M: base pair/molecular weight marker) (b) The relative abundance and fractional <sup>13</sup>C-labeling of 3 amino acids (aspartate, negatively charged; phenylalanine, nonpolar and tyrosine, polar) are shown for DiCre-/+ rapamycin (R) parasites and AT6-1-iKD-/+R parasites. DiCre+R parasites were incubated in regular (natural abundance) medium while  $\Delta$ TgApiAT6-1-/+R parasites and DiCre+R parasites were incubated in medium containing a mix of U-<sup>13</sup>C-labeled amino acids for 1 hour. The abundance of amino acids was determined as the sum of each amino acid's mass isotopologues normalized to the internal standard and to the relative abundance in DiCre-R parasites (normalized abundance of 1). <sup>13</sup>C-labeling was quantified based on the abundance of all mass isotopologues following background correction. Statistically significant differences in abundance (bottom, black) and <sup>13</sup>C-labeling (top, red) are indicated (not significant: n.s., \*\*: p-value < 0.001, \*\*\*: p-value < 0.0001).