SUPPLEMENTAL MATERIAL

RidA proteins contribute to fitness of *S. enterica* and *E. coli* by reducing 2AA stress and moderating flux to isoleucine biosynthesis

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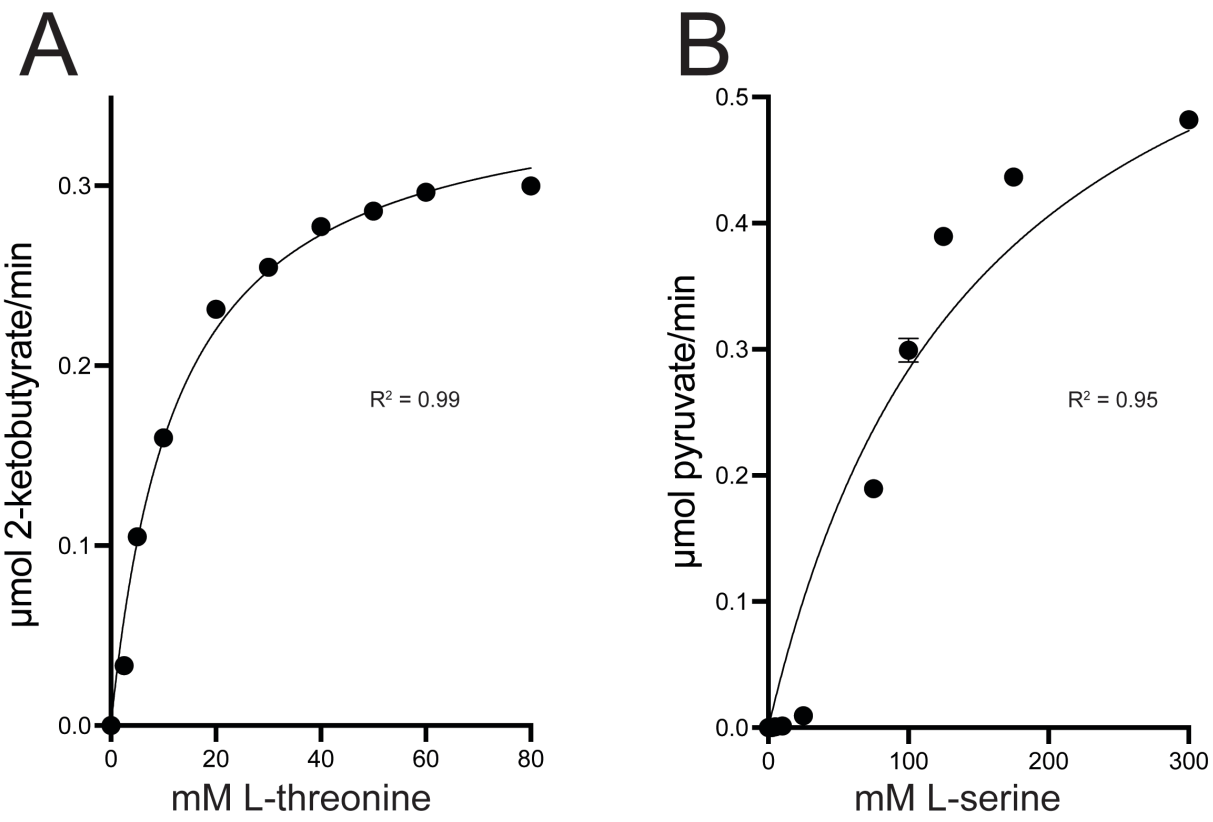

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	L-Threonine	L-Serine
K_M (mM)	13 ± 0.3	141 ± 3.0
k_{cat} (s^{-1})	598 ± 4.0	1179 ± 15
k_{cat}/K_M (s^{-1} mM^{-1})	47 ± 1.0	8 ± 0.1

Figure S1: Kinetic characterization of $_{EC}$IlvA and modeling of endogenous product formation. Shown above are kinetic curves of $_{EC}$IlvA using (A) threonine, measuring the rate of 2-ketobutyrate production, or (B) serine, measuring the rate of pyruvate production. Data shown represent the mean and standard deviation between technical triplicates. (C) Kinetic parameters of $_{EC}$IlvA using threonine or serine as a substrate, as calculated from the data shown in A and B.

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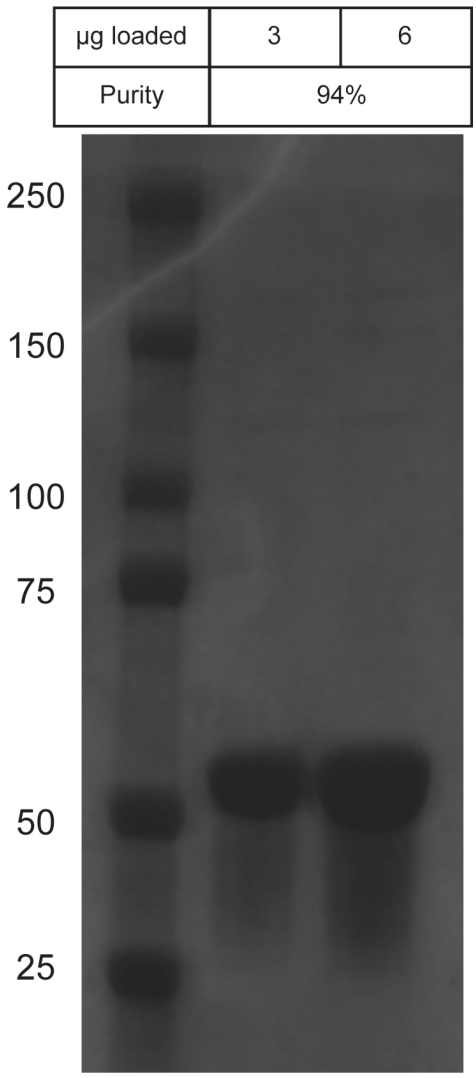

Figure S2: Purified $_{EC}$IlvA. $_{EC}$IlvA was purified from E. coli BL21-AI. Samples were boiled in buffer containing beta-mercaptoethanol before the indicated µg of protein were loaded onto a 7.5% TGX gel (BioRad). Precision Plus Protein Dual Color Standards were loaded into the left-most lane) and were separated by electrophoresis. The gel was stained with Coomassie Blue and imaged using Axygen Gel Documenation system and purity was determined by densitometry using VisionWorks software version 8.22.18309.10577.