

Table 1: Kinetic Parameters for the Activation of Leucine and Isoleucine by *E. coli* and hs mt LeuRS^a

	K_M (mM)	k_{cat} (s ⁻¹)	$\frac{k_{\text{cat}}}{K_M}$ (s ⁻¹ μM ⁻¹)	discrimination factor
<i>E. coli</i> LeuRS				
leucine	0.015 ± 0.002	11.0 ± 0.4	0.8	1600
isoleucine	0.25 ± 0.05	0.10 ± 0.2	0.0005	
hs mt LeuRS				
leucine	0.13 ± 0.02	2.0 ± 0.1	0.015	3000
isoleucine	14 ± 2	0.070 ± 0.004	0.000005	

^a Kinetic parameters were determined at pH 7.5 and 37 °C.