

**Table S1 Table.** Average parameters

Parameter	Type I Value	Unit
$BW$	78 [1]	Kg
$BV$	78 [1]	L
$V_g$	1.49 [1]	dL/kg
$k_1$	0.065 [1,2]	min <sup>-1</sup>
$k_2$	0.079 [1,2]	min <sup>-1</sup>
$V_I$	0.04 [1]	L/kg
$m_1$	0.379 [1]	min <sup>-1</sup>
$m_2$	0.673 [1]	min <sup>-1</sup>
$m_4$	0.269 [1]	min <sup>-1</sup>
$m_5$	0.0526 [1]	min.kg/pmol
$m_6$	0.8118 [1]	dimensionless
$HE_b$	0.112[1]	dimensionless
$k_{p1}$	change Eq. (??)	mg/kg/min
$k_{p2}$	0.0021 [1,2]	min <sup>-1</sup>
$k_{p3}$	0.009 [1,2]	mg/kg/min per pmol/L
$k_{p4}$	0.0786 [1]	mg/kg/min per pmol/L
$k_i$	0.0066 [1]	min <sup>-1</sup>
$k_{max}$	0.0465 [1]	min <sup>-1</sup>
$k_{min}$	0.0076 [1]	min <sup>-1</sup>
$k_{abs}$	0.023 [1]	min <sup>-1</sup>
$k_{gri}$	0.0465 [1]	min <sup>-1</sup>
$f$	0.9 [1]	dimensionless
$a$	0.00016 [1]	mg <sup>-1</sup>
$b$	0.68 [1]	dimensionless
$c$	0.00023 [1]	mg <sup>-1</sup>
$d$	0.009 [1]	dimensionless
$F_{cns}$	1 [1]	mg/kg/min
$V_{m0}$	changes (Eq. (S10))	mg/kg/min
$V_{mx}$	0.034 [1]	mg/kg/min per pmol/L
$K_{m0}$	4661.21	mg/kg
$P_{2u}$	0.084 [1]	min <sup>-1</sup>
$k_{e1}$	0.0007 [1]	min <sup>-1</sup>
$k_{e2}$	269 [1]	mg/kg
$k_d$	0.0164 [2]	min <sup>-1</sup>
$k_{a1}$	0.0018 [2]	min <sup>-1</sup>
$k_{a2}$	0.0182 [2]	min <sup>-1</sup>
$\delta$	0.682 [3]	(ng/L per mg/dL)
$\sigma$	1.093 [3]	min <sup>-1</sup>
$n$	0.15 [3]	min <sup>-1</sup>
$\zeta$	0.009 [3]	(mg/kg/min per ng/L)
$\rho$	0.57 [3]	(ng/L/min per mg/dL)
$k_H$	0.16 [3]	min <sup>-1</sup>
$I_{th}$	$I_b$ [3]	(pmol/L)
$G_{th}$	$G_b$ [3]	mg/dL
$k_{h1}$	0.0164 [3]	min <sup>-1</sup>
$k_{h2}$	0.0018 [3]	min <sup>-1</sup>
$k_{h3}$	0.0182 [3]	min <sup>-1</sup>