Competitve	Noncompetitive	Uncompetitive
$E + S \underset{}{\overset{K_s}{\leftrightarrows}} ES \xrightarrow{k_p} E + P$ + I K_i↓↑ EI K_S= [E][S]/[ES] K_i= [E][I]/[EI] k_P= rate constant for the breakdown of ES to E+P	$E + S \underset{}{\overset{K_s}{\leftrightarrows}} ES \xrightarrow{k_p} E + P$ + I K_i↓↑ EI + S $\underset{K_s}{\leftrightarrows}$ ESI K_S= [E][S]/[ES] = [EI][S]/[ESI] K_i= [E][I]/[EI] = [ES][I]/[ESI]	$E + S \underset{}{\overset{K_s}{\leftrightarrows}} ES \xrightarrow{k_p} E + P$ + I K_i↓↑ ESI K_S= [E][S]/[ES] K_i= [ES][I]/[ESI]
$\frac{1}{v} = \frac{K_m}{V_{max}}\left(1 + \frac{[I]}{K_i}\right)\frac{1}{[S]} + \frac{1}{V_{max}}$	$\frac{1}{v} = \frac{K_m}{V_{max}}\left(1 + \frac{[I]}{K_i}\right)\frac{1}{[S]} + \frac{1}{V_{max}}\left(1 + \frac{[I]}{K_i}\right)$	$\frac{1}{v} = \frac{K_m}{V_{max}}\frac{1}{[S]} + \frac{1}{V_{max}}\left(1 + \frac{[I]}{K_i}\right)$
$K_i = \frac{IC_{50}}{1 + \frac{[S]}{K_m}}$	$K_i = IC_{50}$	$K_i = \frac{IC_{50}}{1 + \frac{K_m}{[S]}}$
$[S] = K_m$ $K_i = \frac{IC_{50}}{2}$	$K_i = IC_{50}$	$K_i = \frac{IC_{50}}{2}$
$[S] \gg K_m$ $K_i \ll IC_{50}$	$K_i = IC_{50}$	$K_i \cong IC_{50}$
$[S] \ll K_m$ $K_i \cong IC_{50}$	$K_i = IC_{50}$	$K_i \ll IC_{50}$

Table 2