

reaction	f	$\hat{f}$	elementary?
$\emptyset \xrightarrow{k} X_i$	k	k	✓
$X_i \xrightarrow{k} X_j$	$k[X_i]$	$k \frac{n_i}{\Omega}$	✓
$X_i + X_i \xrightarrow{k} X_j$	$k[X_i]^2$	$k \frac{n_i}{\Omega} \frac{(n_i-1)}{\Omega}$	✓
$X_i + X_j \xrightarrow{k} X_l$	$k[X_i][X_j]$	$k \frac{n_i}{\Omega} \frac{n_j}{\Omega}$	✓
$X_i \xrightarrow{E} X_j$	$v_{\max} \frac{[X_i]}{K_M + [X_i]}$	$v_{\max} \frac{(n_i/\Omega)}{K_M + (n_i/\Omega)}$	×
$G \xrightarrow{X_i} G + X_j$	$v_{\max} \frac{[X_i]^m}{K_A^m + [X_i]^m}$	$v_{\max} \frac{(n_i/\Omega)^m}{K_A^m + (n_i/\Omega)^m}$	×
$G \xrightarrow{X_i} G + X_j$	$v_{\max} \frac{K_I^m}{K_I^m + [X_i]^m}$	$v_{\max} \frac{K_I^m}{K_I^m + (n_i/\Omega)^m}$	×