$$\begin{array}{ccc}
\mathrm{Mor}_{\mathcal{A}}(a,b) \otimes I & \xrightarrow{\ id \otimes j_a\ } & \mathrm{Mor}_{\mathcal{A}}(a,b) \otimes \mathrm{Mor}_{\mathcal{A}}(a,a) \\
& \searrow{\scriptstyle \rho} \quad \circlearrowleft & \downarrow{\scriptstyle m_{aab}} \\
& & \mathrm{Mor}_{\mathcal{A}}(a,b)
\end{array}$$