

$$\begin{array}{ccc}
\mathrm{Mor}_{\mathcal{A}}(b, c) \otimes \mathrm{Mor}_{\mathcal{A}}(a, b) & \xrightarrow{\quad m_{abc} \quad} & \mathrm{Mor}_{\mathcal{A}}(a, c) \\
F_{bc} \otimes F_{ab} \downarrow & \circlearrowleft & \downarrow F_{ac} \\
\mathrm{Mor}_{\mathcal{A}'}(F(b), F(c)) \otimes \mathrm{Mor}_{\mathcal{A}'}(F(a), F(b)) & \xrightarrow[\quad m'_{F(a)F(b)F(c)} \quad]{} & \mathrm{Mor}_{\mathcal{A}'}(F(a), F(c))
\end{array}$$