

$$\begin{array}{ccc}
 I \otimes (A \otimes B) & \xrightarrow{\alpha_{I,A,B}} & (I \otimes A) \otimes B \\
 \searrow \lambda_{A \otimes B} & & \swarrow \rho_{A \otimes 1_B} \\
 & A \otimes B &
 \end{array}$$