

$$\begin{array}{ccc}
 (c \otimes I) \otimes d & \xrightarrow{\alpha_{c,I,d}} & c \otimes (I \otimes d) \\
 \searrow \rho_c \otimes I & & \swarrow I \otimes \lambda_d \\
 & c \otimes d &
 \end{array}$$