

$$\begin{array}{ccc}
I \otimes I & I \otimes (I \otimes (v)_A) & ((u)_A \otimes I) \otimes I \\
\begin{array}{c} \rho_I \downarrow \downarrow \lambda_I \end{array} & \begin{array}{c} 1_I \otimes \lambda_{(v)_A} \downarrow \downarrow \lambda_{(I \otimes (v)_A)} \end{array} & \begin{array}{c} \rho_{(u)_A} \otimes 1_I \downarrow \downarrow \rho_{((u)_A \otimes I)} \end{array} \\
I & I \otimes (v)_A & (u)_A \otimes I
\end{array}$$