

$$\begin{array}{ccc}
 X \otimes \prod_{\lambda \in \Lambda} K_\lambda & \xrightarrow{\cong} & \prod_{\lambda \in \Lambda} X \otimes K_\lambda \\
 \downarrow g \otimes 1 & & \downarrow \Pi(g \otimes 1) \\
 f \otimes 1 \left(Y \otimes \prod_{\lambda \in \Lambda} K_\lambda \right. & \xrightarrow{\cong} & \left. \prod_{\lambda \in \Lambda} Y \otimes K_\lambda \right) \Pi(f \otimes 1) \\
 \downarrow h \otimes 1 & & \downarrow \Pi(h \otimes 1) \\
 M \otimes \prod_{\lambda \in \Lambda} K_\lambda & \hookrightarrow & \prod_{\lambda \in \Lambda} M \otimes K_\lambda
 \end{array}$$