

$$\begin{array}{ccccc}
\underline{R} \otimes^{\mathbf{L}} (\underline{R} \otimes^{\mathbf{L}} X) & \xrightarrow{\underline{R} \otimes^{\mathbf{L}} (l^{\rho}_{\underline{R} \otimes^{\mathbf{L}} X})} & \underline{R} \otimes^{\mathbf{L}} X & \xrightarrow{l^{\rho}_X} & X \\
\alpha^{\rho} \downarrow & & & & \parallel \\
(\underline{R} \otimes^{\mathbf{L}} \underline{R}) \otimes^{\mathbf{L}} X & \xrightarrow{(l^{\rho}_{\underline{R} \otimes^{\mathbf{L}} \underline{R}}) \otimes^{\mathbf{L}} X} & \underline{R} \otimes^{\mathbf{L}} X & \xrightarrow{l^{\rho}_X} & X
\end{array}$$