$$(\mathbf{A} \times \{\bullet\}) \times \mathbf{B} \xrightarrow{\alpha_{\mathbf{A}, \{\bullet\}, \mathbf{B}}} \mathbf{A} \times (\{\bullet\} \times \mathbf{B})$$

$$\rho_{\mathbf{A}} \times \mathrm{id}_{\mathbf{B}} \xrightarrow{\mathbf{A} \times \mathbf{B}} \mathrm{id}_{\mathbf{A}} \times \lambda_{\mathbf{B}}$$

$$\langle a, b \rangle$$