$$(\langle a, * \rangle, b \rangle \longmapsto \langle a, \langle *, b \rangle \rangle$$

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

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

$$\langle a, b \rangle$$