

$$\begin{array}{ccc}
 G_i & \xrightarrow{\varphi_i} & G \\
 & \searrow \varphi_i & \downarrow koh \\
 & & G
 \end{array}$$

$$\begin{array}{ccc}
 G_i & \xrightarrow{\varphi'_i} & G' \\
 & \searrow \varphi'_i & \downarrow hok \\
 & & G'
 \end{array}$$