$$A_{1} \stackrel{f_{A}}{\rightarrowtail} A_{2} \stackrel{g_{A}}{\longrightarrow} A_{3} \stackrel{\delta_{A}}{\longrightarrow}$$

$$\downarrow i_{2} \qquad \downarrow i_{3} \qquad \downarrow i_{4} \qquad \downarrow i_{5} \qquad \downarrow i_{5}$$