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

$$\Big\downarrow f\times(g\times h) \qquad\qquad \Big\downarrow (f\times g)\times h$$

$$A' \times (B' \times C') \xrightarrow[\alpha_{A',B',C'}]{} (A' \times B') \times C'$$