

$$\begin{array}{ccc}
 (F(X) \otimes_D F(Y)) \otimes_D F(Z) & \xrightarrow{\text{as}_D^{F(X), F(Y), F(Z)}} & F(X) \otimes_D (F(Y) \otimes_D F(Z)) \\
 \downarrow \mu_{X,Y} \otimes_D \text{Id}(F(Z)) & & \downarrow \text{Id}(F(X)) \otimes_D \mu_{Y,Z} \\
 F(X \otimes_C Y) \otimes_D F(Z) & & F(X) \otimes_D F(Y \otimes_C Z) \\
 \downarrow \mu_{X \otimes_D Y, Z} & & \downarrow \mu_{X, Y \otimes_D Z} \\
 F((X \otimes_C Y) \otimes_C Z) & \xrightarrow{F(\text{as}_{X,Y,Z}^C)} & F(X \otimes_C (Y \otimes_C Z))
 \end{array}$$