$$
\begin{array}{ccc}
\left(F(x) \otimes_{\mathbf{D}} F(y)\right) \otimes_{\mathbf{D}} F(z) & \xrightarrow{\alpha^{\mathbf{D}}_{F(x),F(y),F(z)}} & F(x) \otimes_{\mathbf{D}} \left(F(y) \otimes_{\mathbf{D}} F(z)\right) \\
\downarrow & & \downarrow \\
F(x \otimes_{\mathbf{C}} y) \otimes_{\mathbf{D}} F(z) & & F(x) \otimes_{\mathbf{D}} F(y \otimes_{\mathbf{C}} z) \\
\downarrow & & \downarrow \\
F((x \otimes_{\mathbf{C}} y) \otimes_{\mathbf{C}} z) & \xrightarrow{F(\alpha^{\mathbf{C}}_{x,y,z})} & F(x \otimes_{\mathbf{C}} (y \otimes_{\mathbf{C}} z))
\end{array}
$$