

$$\mathbf{1}_{\mathbf{D}} \otimes_{\mathbf{D}} F(X) \xrightarrow{\text{iso} \otimes_{\mathbf{D}} \text{Id}_{F(X)}} F(\mathbf{1}_{\mathbf{C}}) \otimes_{\mathbf{D}} F(X)$$

$$\text{lu}_{\mathbf{D}} \downarrow$$

$$F(X) \xleftarrow{F(\text{lu}_X^{\mathbf{C}})} F(\mathbf{1}_{\mathbf{C}} \otimes_{\mathbf{C}} X)$$

$$\downarrow \mu_{\mathbf{1}_{\mathbf{C}}, X}$$

$$F(X) \otimes_{\mathbf{D}} \mathbf{1}_{\mathbf{D}} \xrightarrow{\text{Id}_{F(X)} \otimes_{\mathbf{D}} \text{iso}} F(X) \otimes_{\mathbf{D}} F(\mathbf{1}_{\mathbf{C}})$$

$$\text{ru}_{\mathbf{D}} \downarrow$$

$$F(X) \xleftarrow{F(\text{ru}_X^{\mathbf{C}})} F(X \otimes_{\mathbf{C}} \mathbf{1}_{\mathbf{C}})$$

$$\downarrow \mu_{X, \mathbf{1}_{\mathbf{C}}}$$