$$\mathbf{1} \xrightarrow{\eta_X} X \otimes X^{\vee} \xrightarrow{f \otimes \operatorname{id}_{X^{\vee}}} X \otimes X^{\vee} \xrightarrow{\operatorname{br}} X^{\vee} \otimes X \xrightarrow{\epsilon_X} \mathbf{1}$$