

$$X \otimes^{\mathbf{L}} (Y \otimes^{\mathbf{L}} Z) \stackrel{=}{=} \rho(\rho X \otimes \rho(\rho Y \otimes \rho Z))$$

$$\alpha^\rho \downarrow$$

$$\downarrow \rho(a^c)$$

$$(X \otimes^{\mathbf{L}} Y) \otimes^{\mathbf{L}} Z \stackrel{=}{=} \rho(\rho(\rho X \otimes \rho Y) \otimes \rho Z)$$