

$$\begin{array}{ccccc}
 A \oplus A & \xrightarrow{(f,g)} & X & \xrightarrow[p]{\text{TFib}} & Y \\
 \downarrow (1,1) & \searrow (\partial_0, \partial_1) & & \nearrow & \uparrow h \\
 A & & & & \tilde{A} \\
 & \xleftarrow[\sigma]{\text{Weq}} & & & 
 \end{array}$$

The diagram illustrates a commutative structure involving objects  $A \oplus A$ ,  $X$ ,  $Y$ ,  $A$ , and  $\tilde{A}$ . The horizontal top arrow is labeled  $(f,g)$ . The horizontal bottom arrow is labeled  $\sigma$  with  $\text{Weq}$  above it. The vertical left arrow is labeled  $(1,1)$ . The vertical right arrow is labeled  $h$ . A diagonal arrow from  $A \oplus A$  to  $\tilde{A}$  is labeled  $(\partial_0, \partial_1)$ . A dashed diagonal arrow from  $\tilde{A}$  to  $X$  is labeled  $\text{Cofib}$ .