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FGD1 Promote Ferroptosis in Model of CCl4-induced LF Through NRF2 by PTEN Signalling Pathway

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ABSTRACT This study was to explore the feasibility of FGD1 in a model of Liver fibrosis (LF) to evaluate its mechanism. Serum FGD1 mRNA expression was up-regulated in patients with LF and had a positive correlation with serum α-SMA, Collagen I, and E-cadherin mRNA levels. FGD1 levels in liver tissue were increased. *In vitro* model of LF, FGD1 promoted ferroptosis of hepatic fibroblasts and reduced cell growth, in CCl4-induced LF mice. FGD1 induced PTEN/Nrf2 signalling pathway. Sh-FGD1 prevented LF in mice. *In vitro* model of LF, the inhibition of PTEN reduced the effects of FGD1 on hepatic fibroblasts. PTEN reduced LF in LF mice by Sh-FGD1. Taken together, FGD1 induces the PTEN/Nrf2 pathway to promote ferroptosis of hepatic fibroblasts in LF and provide molecular insight into the mechanisms by which the FGD1 regulates ferroptosis in LF.