



Figure 1. Model of ZIP14 function in iron assimilation by hepatocytes. Under normal conditions, iron is acquired from the plasma iron-transport protein transferrin (TF). After binding to the transferrin receptor (TFR1) at the cell surface, the TF-TFR1 complex is internalized into endosomes. Acidification of the endosome causes iron (Fe³⁺) to dissociate from TF. The liberated Fe³⁺ is then reduced to Fe²⁺ and transported into the cytosol via DMT1 or ZIP14. During iron overload, iron can appear in the plasma as non-transferrin-bound iron (NTBI), which is taken up by the cells via ZIP14 at the cell surface.