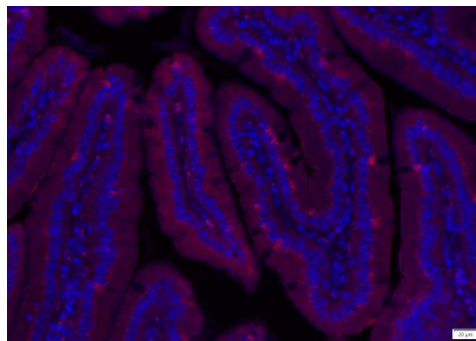
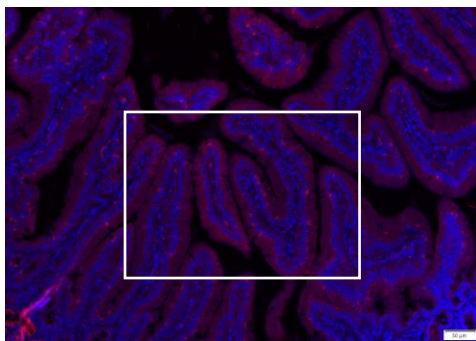
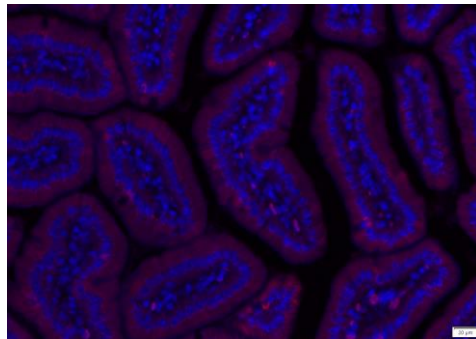
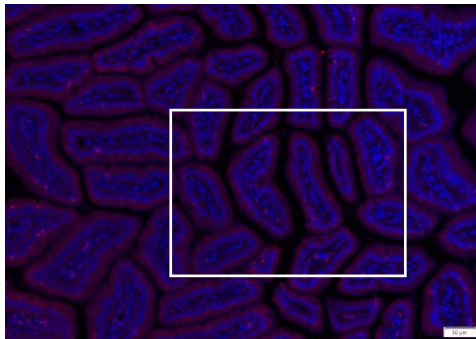
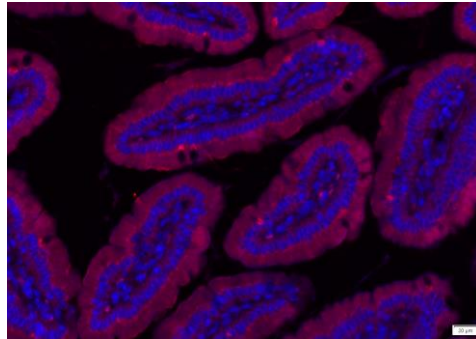
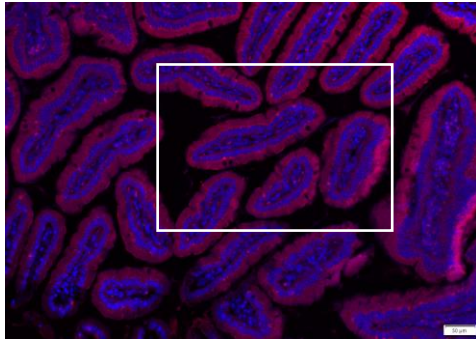
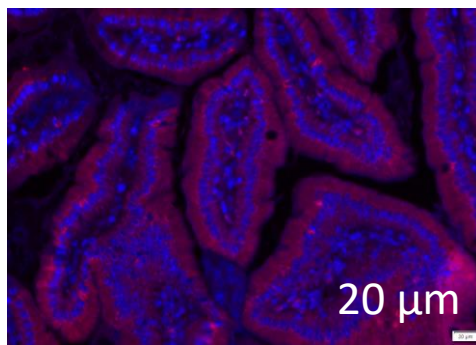
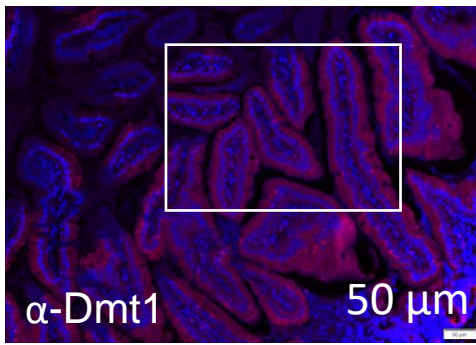
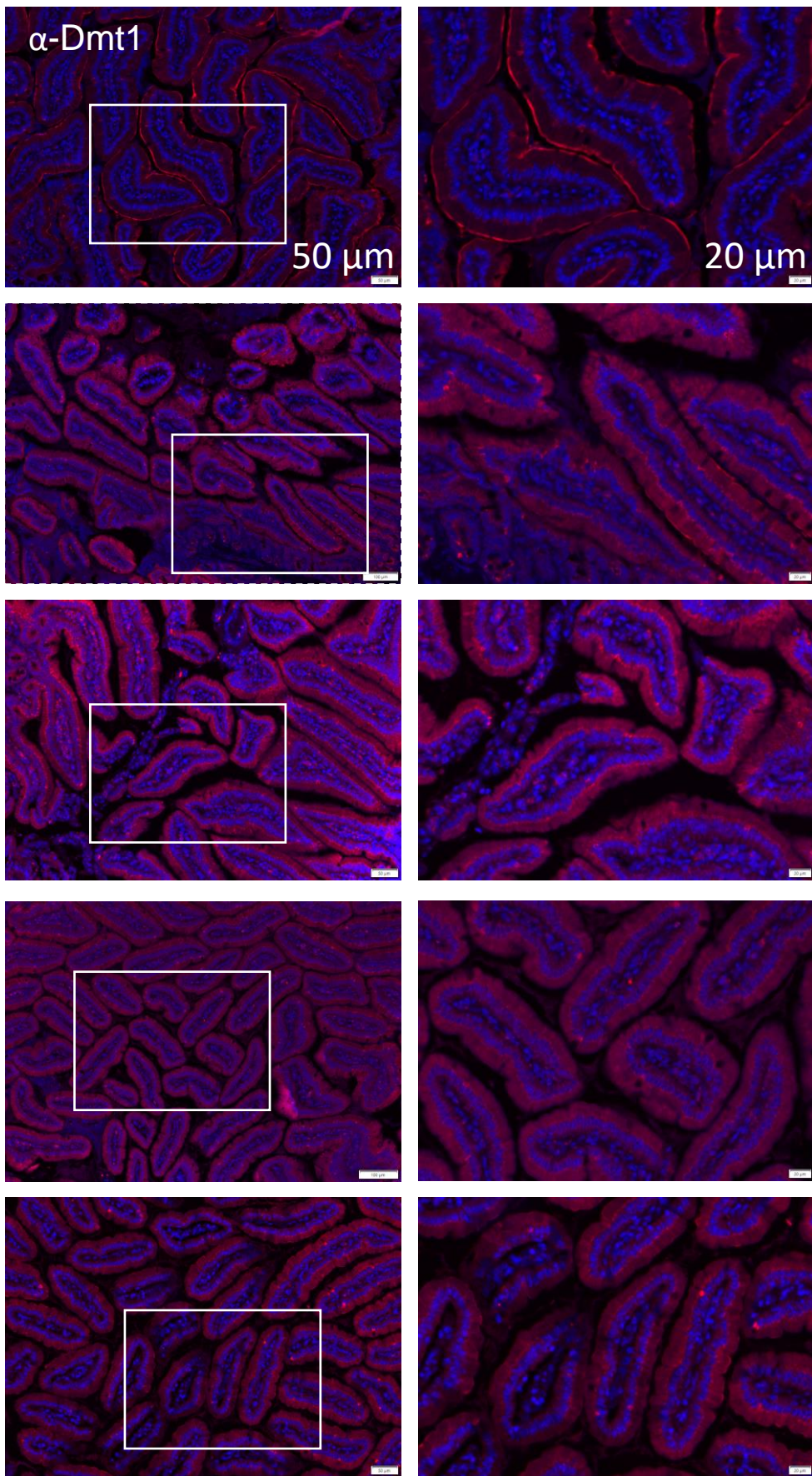


Figure S1

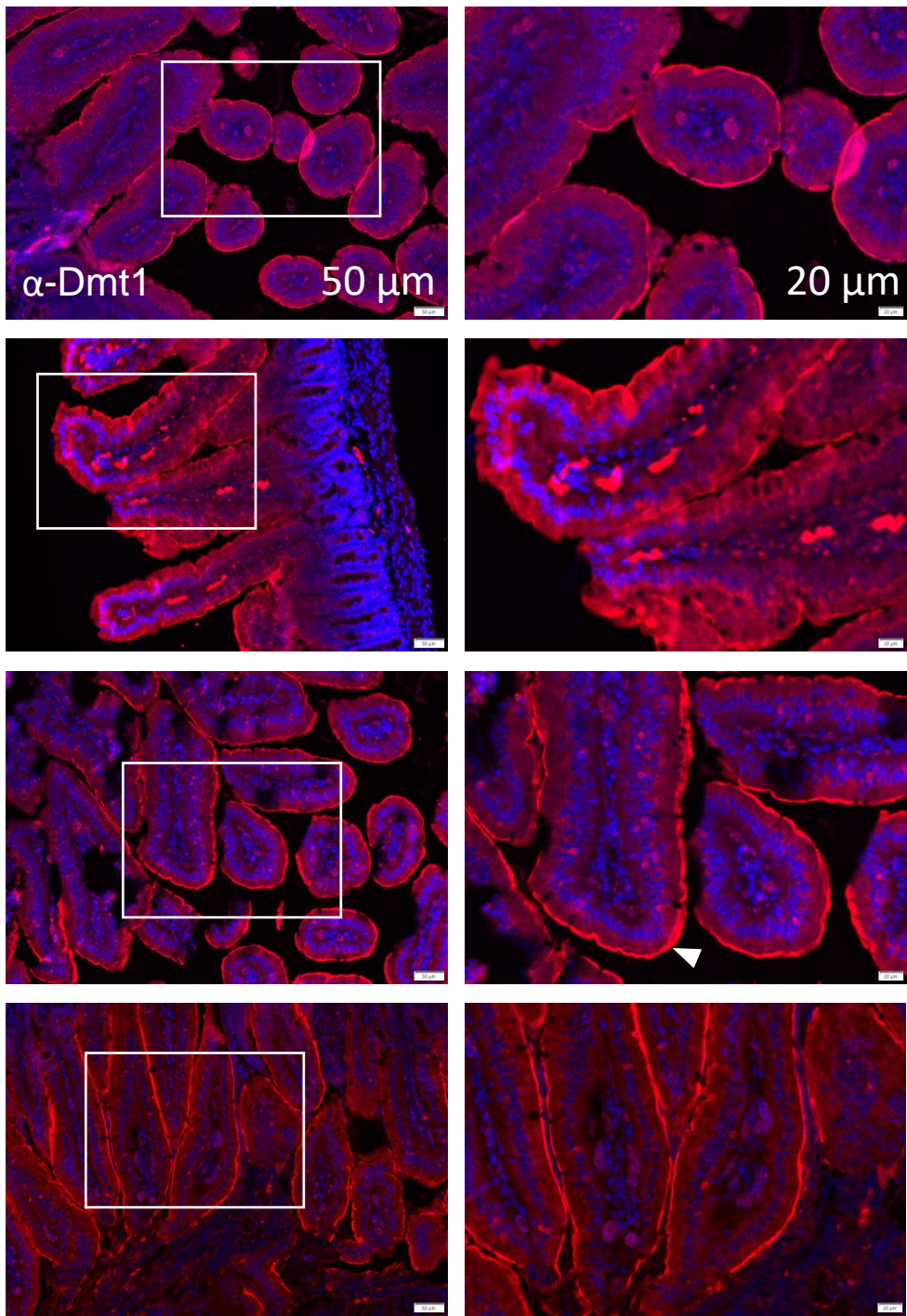


Female *Slc30a10*^{+/+}

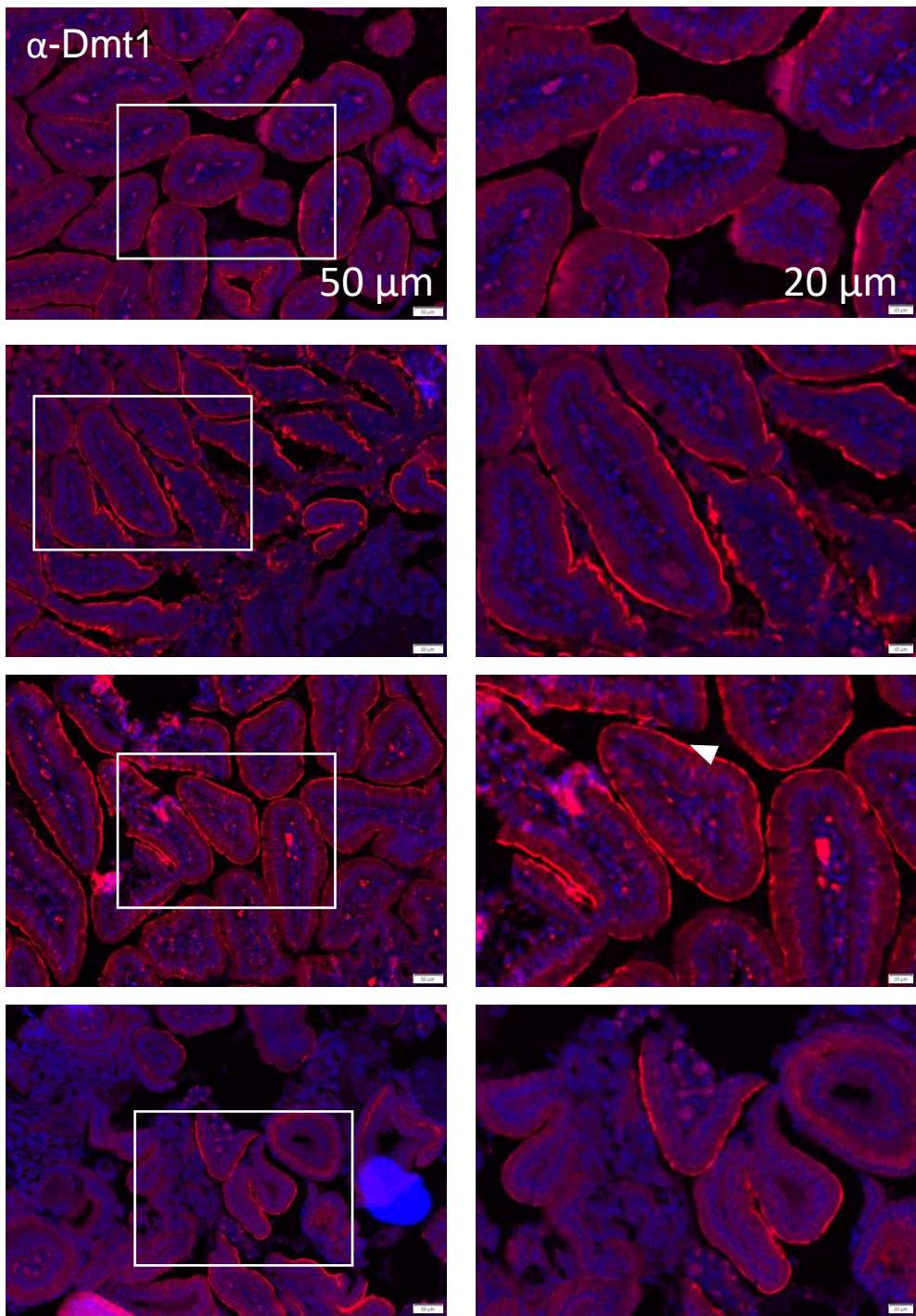


Male *Slc30a10*^{+/+}

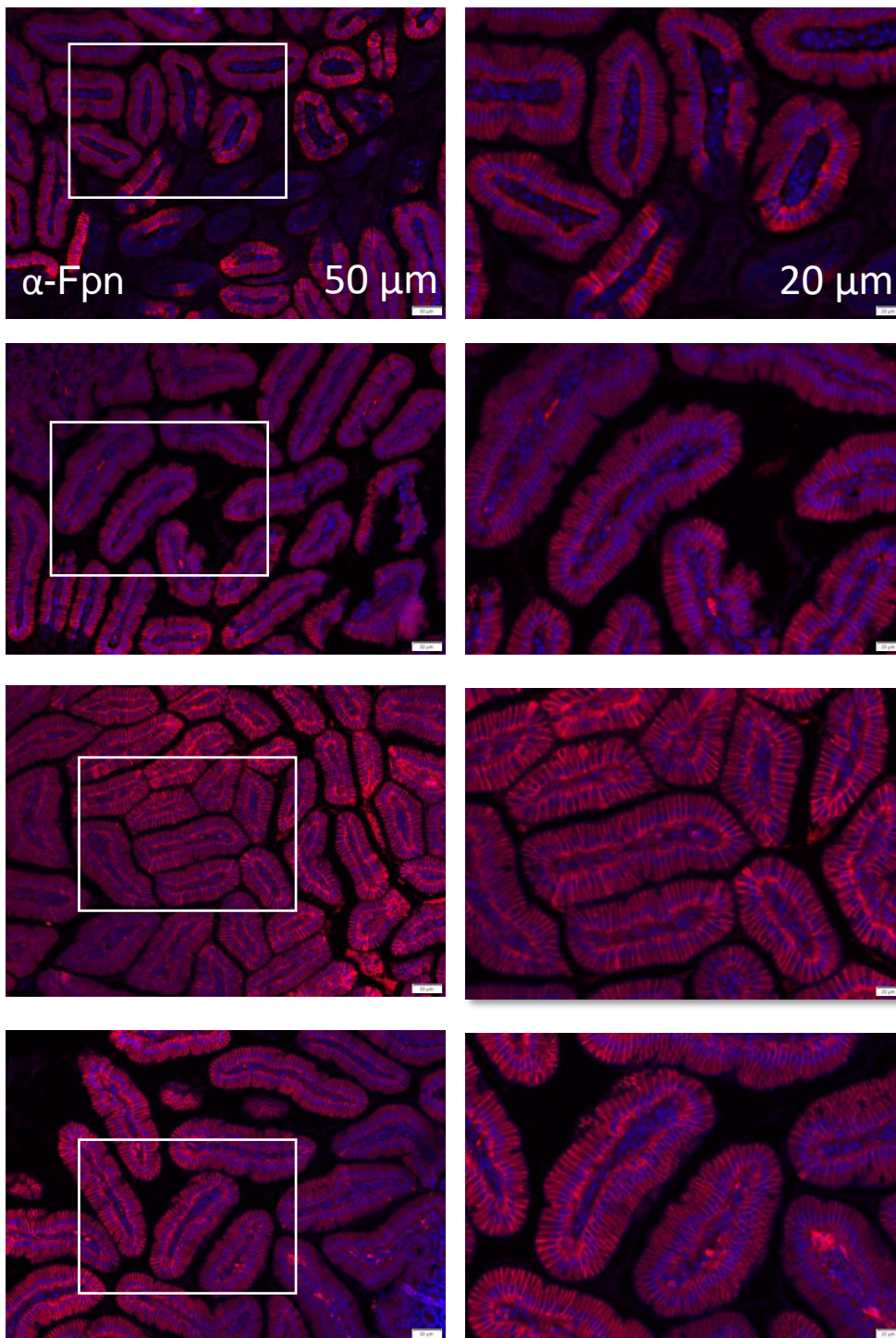
Figure S3



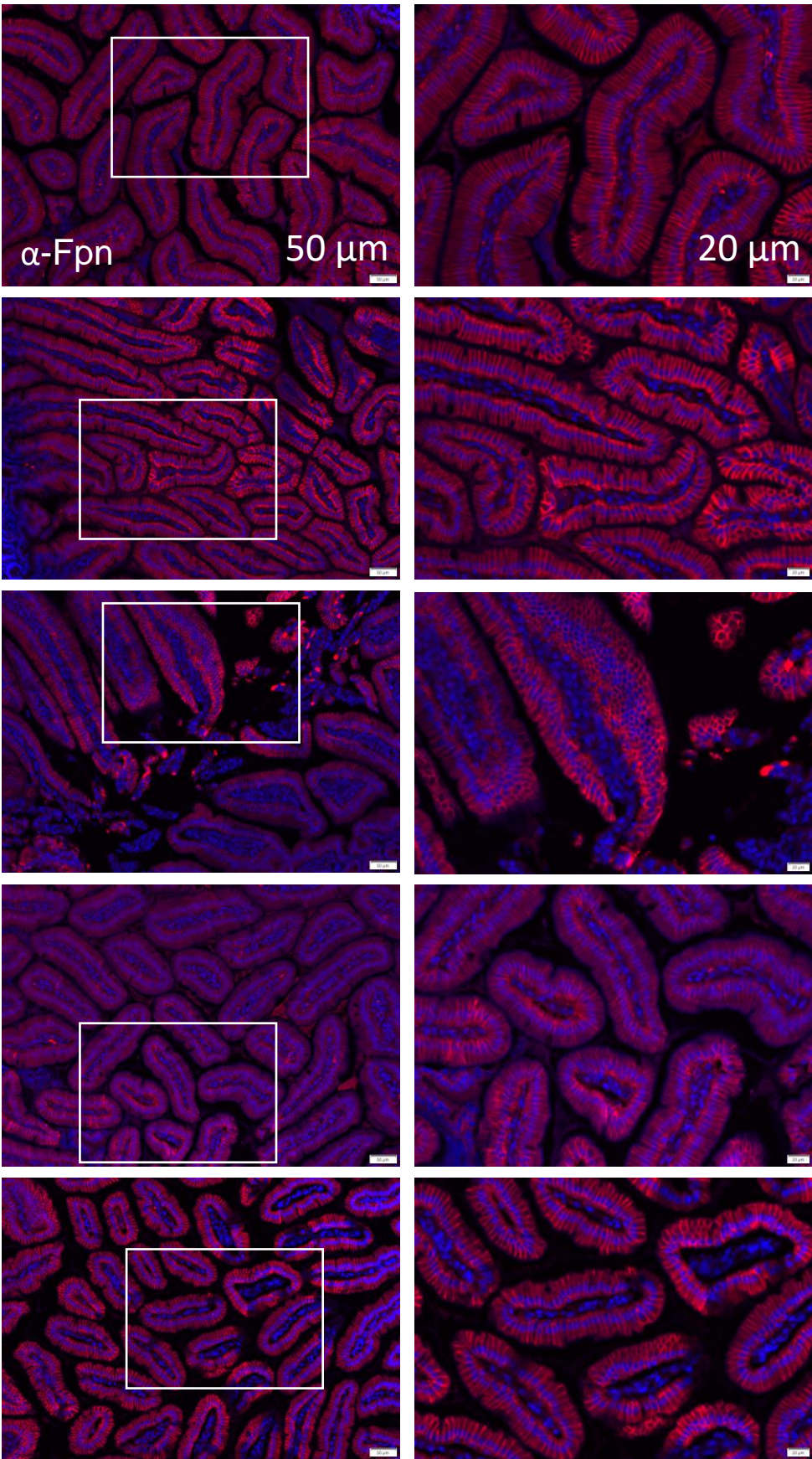
Female *Slc30a10*^{-/-}



Male *Slc30a10*^{-/-}

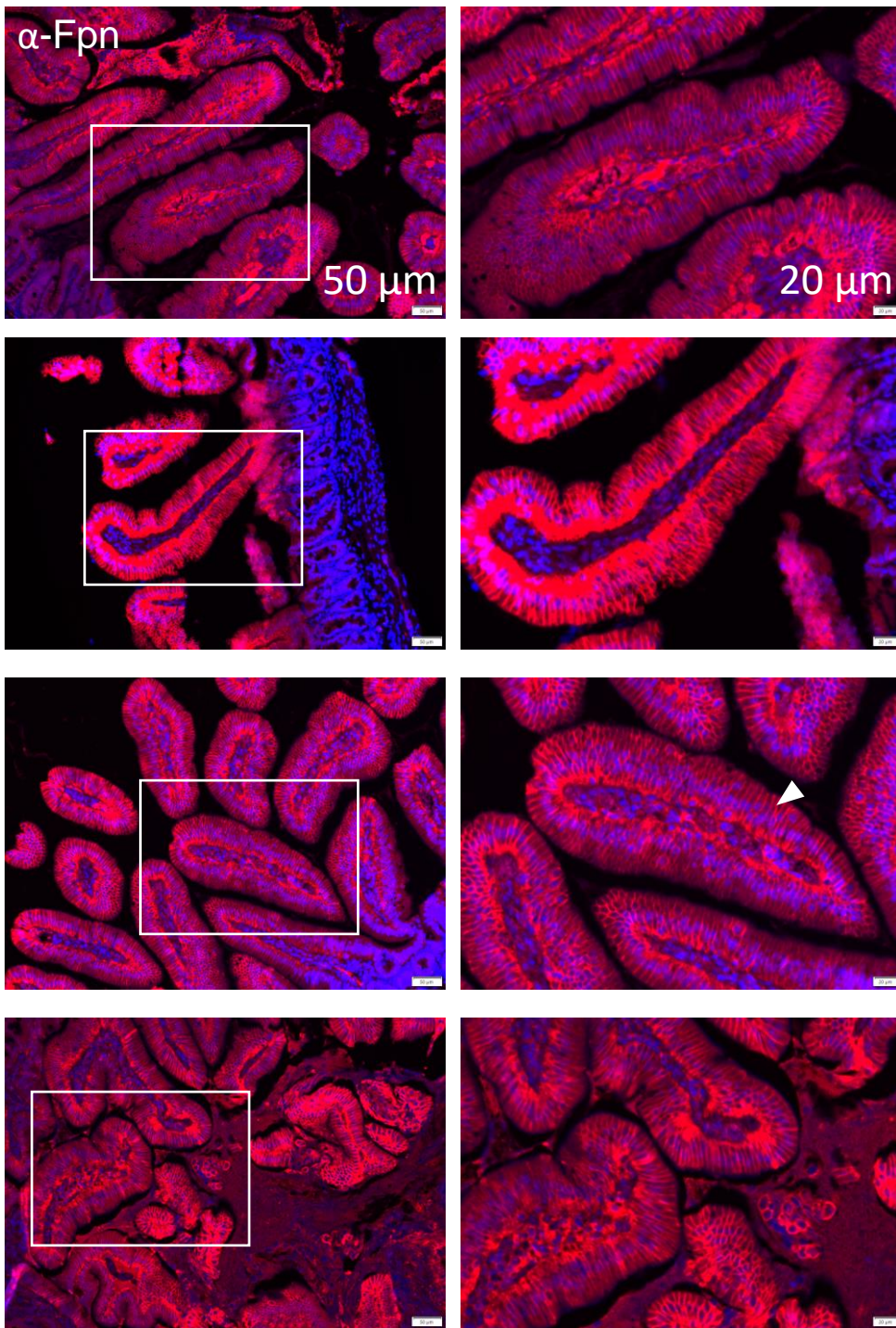


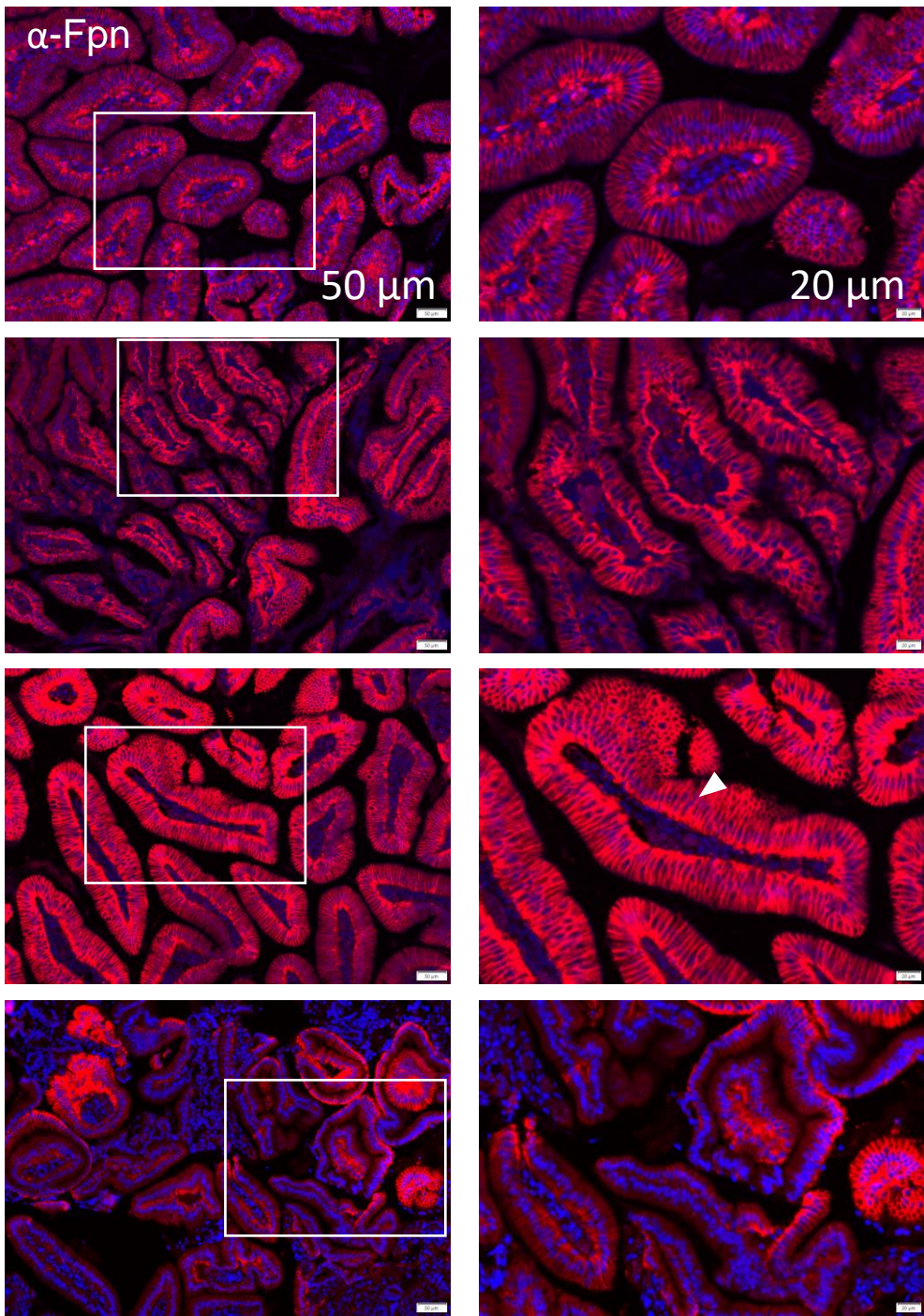
Female *Slc30a10*^{+/+}



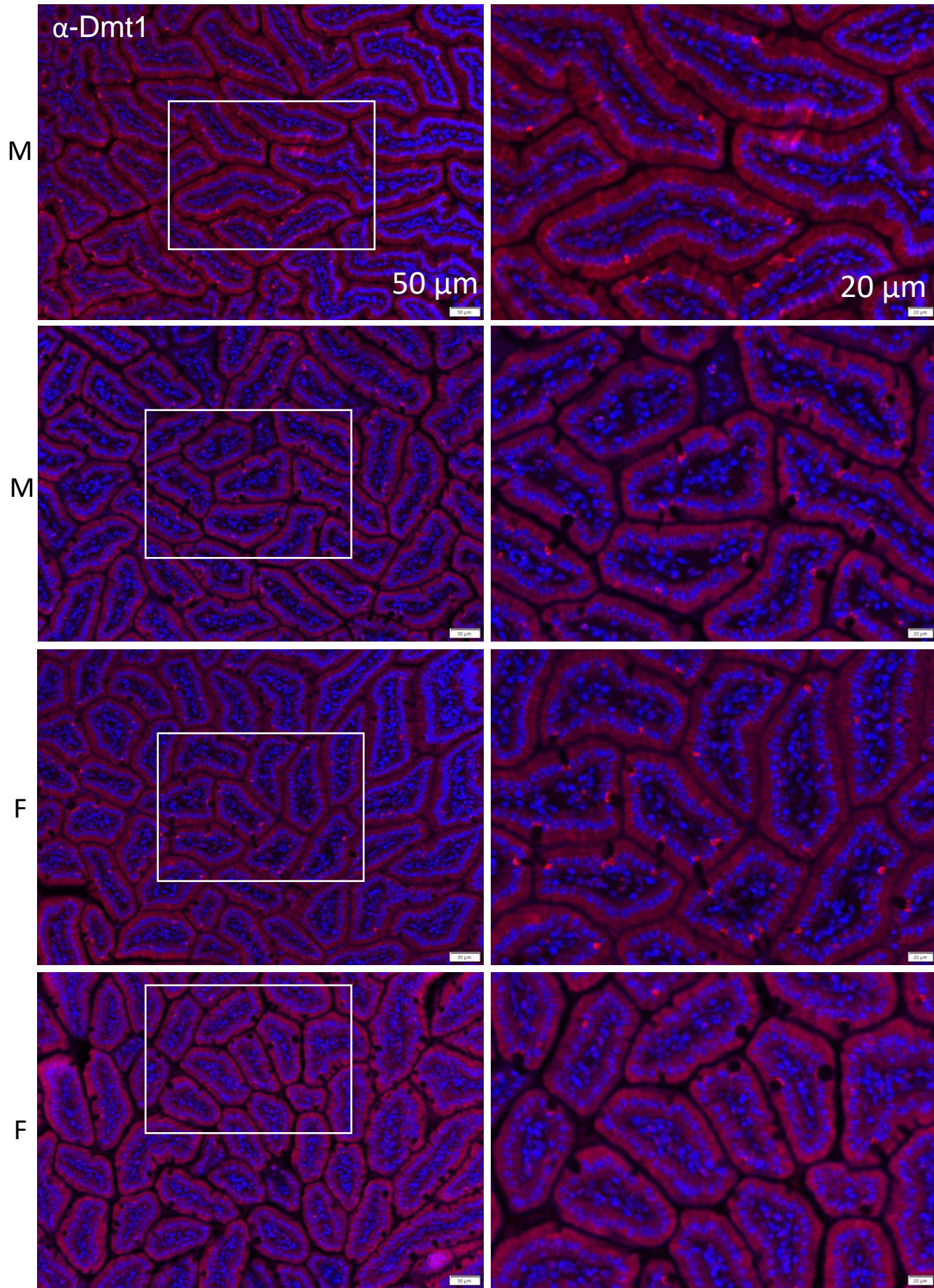
Male *Slc30a10*^{+/+}

Figure S7



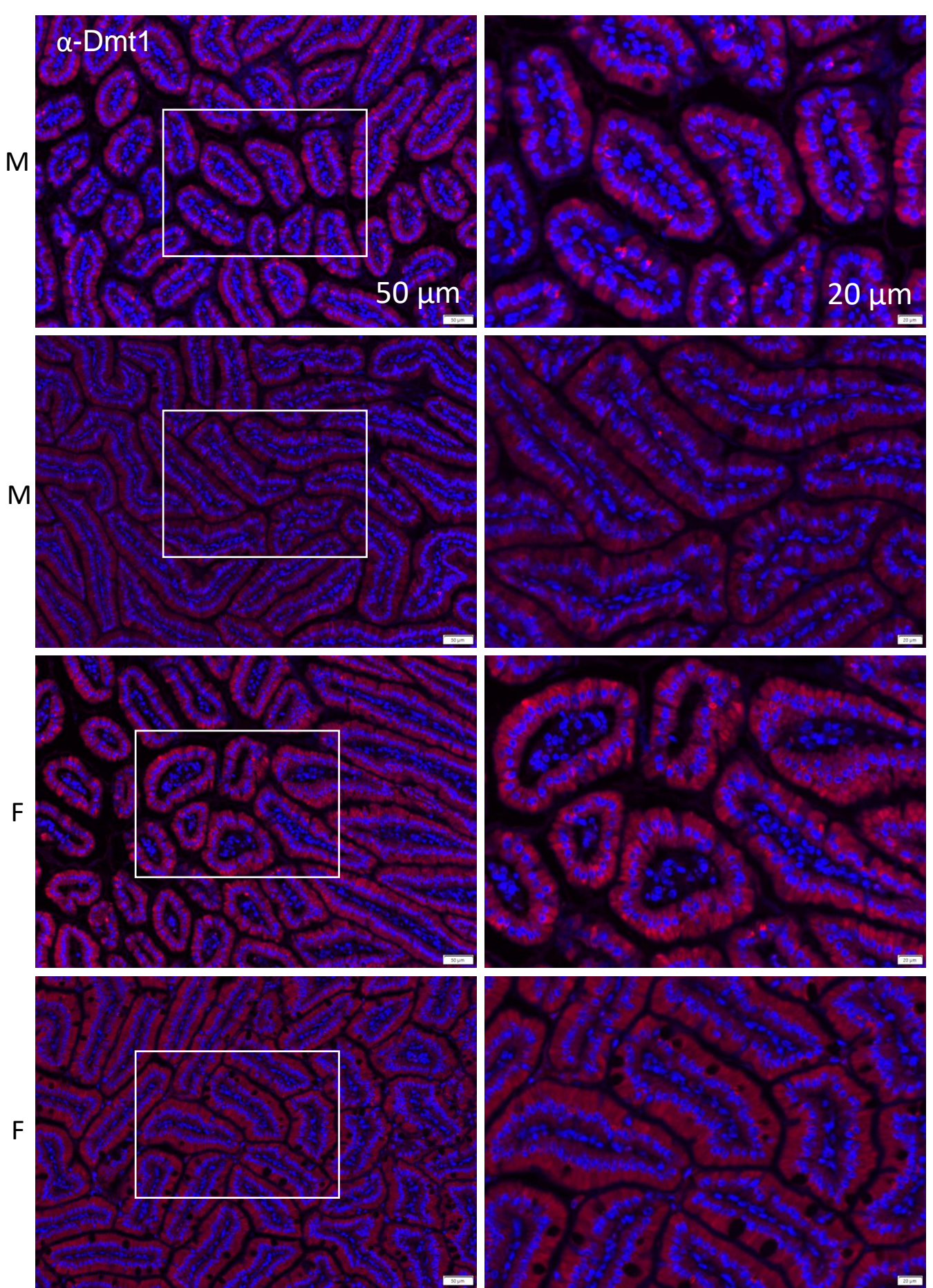


Male *Slc30a10*^{-/-}



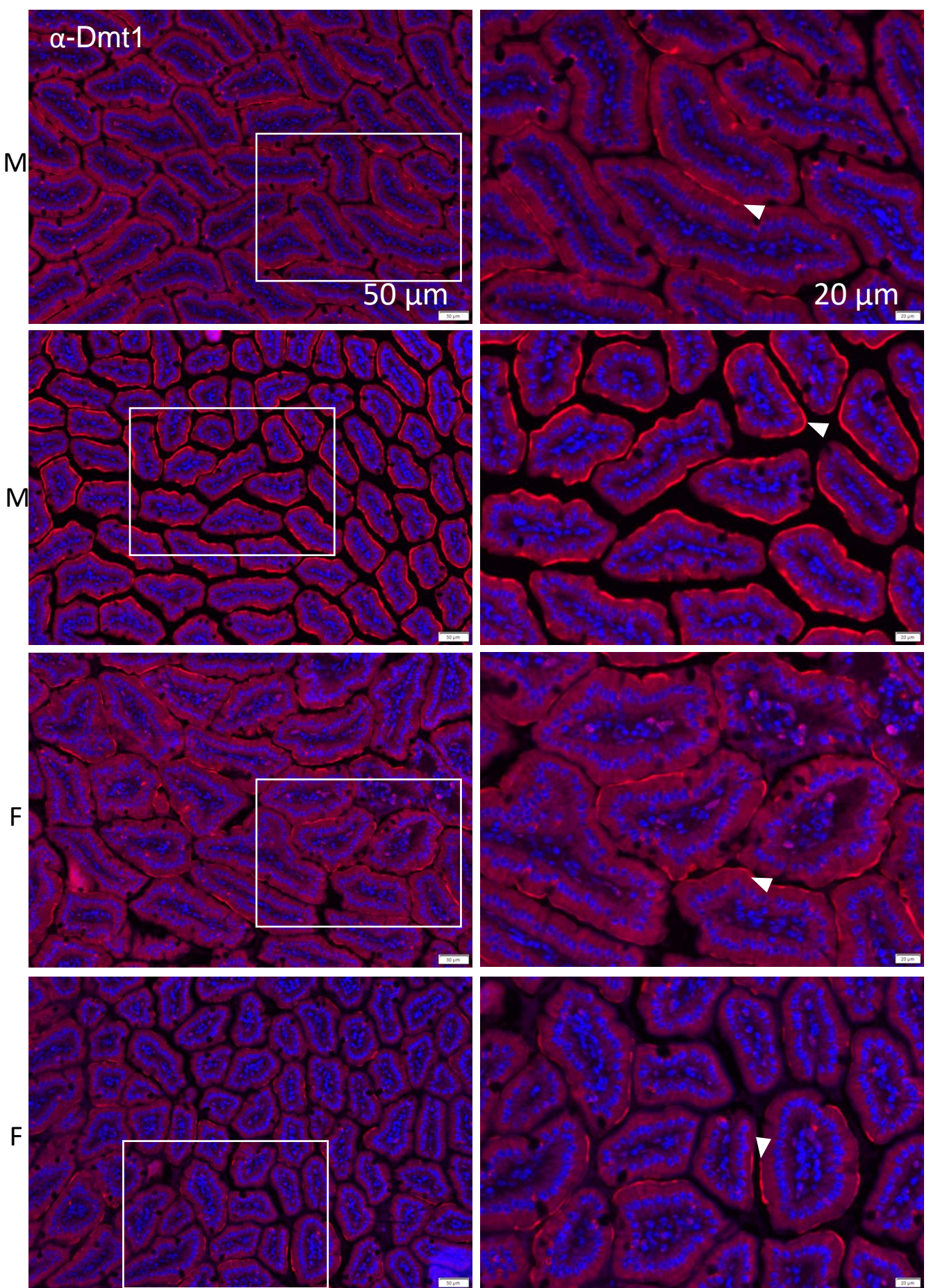
Slc30a10^{+/+} *Dmt1*^{fl/fl}

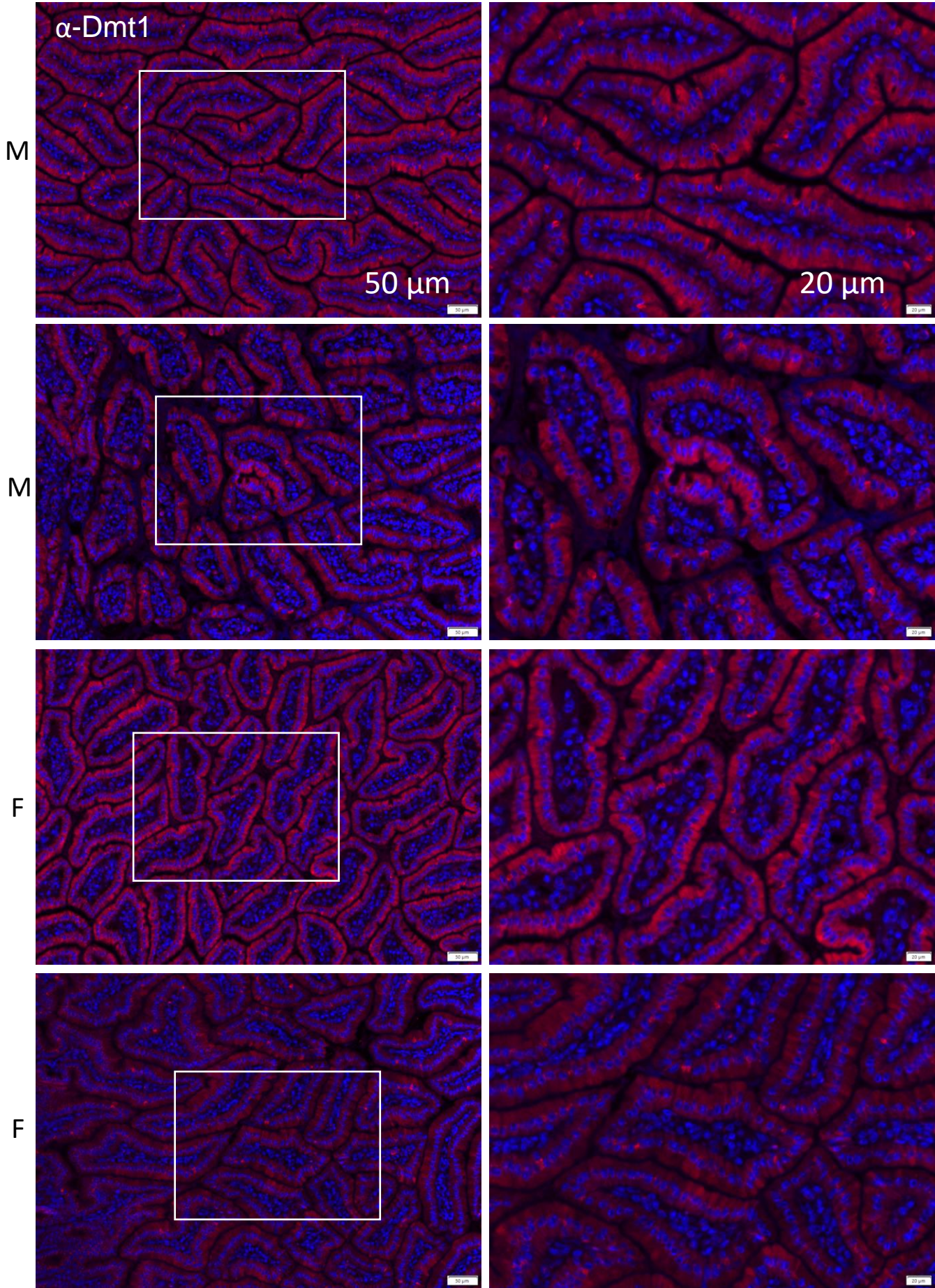
Figure S11



Slc30a10^{+/+} *Dmt1*^{fl/fl} Vil-Ert2

Figure S12





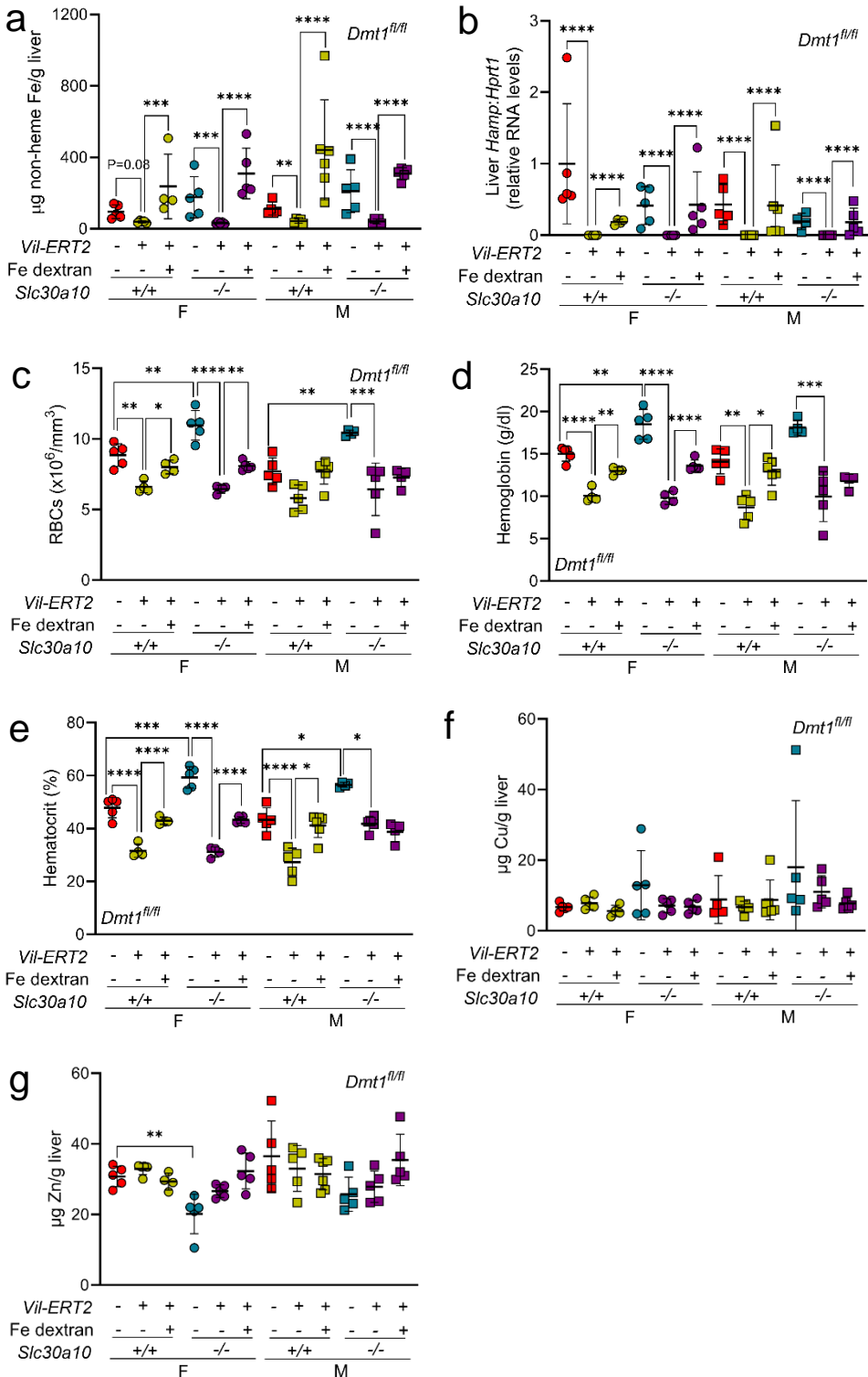


Figure S15

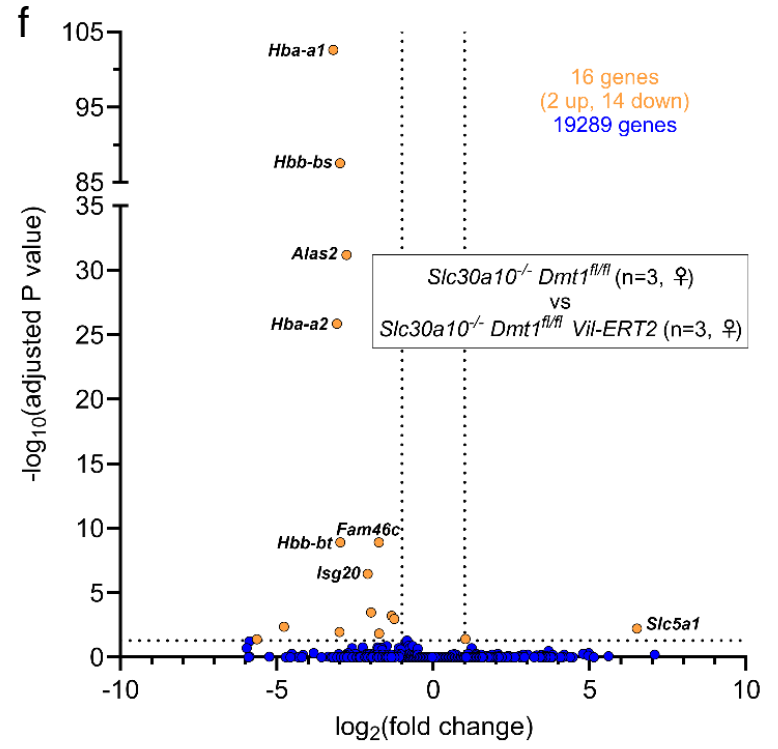
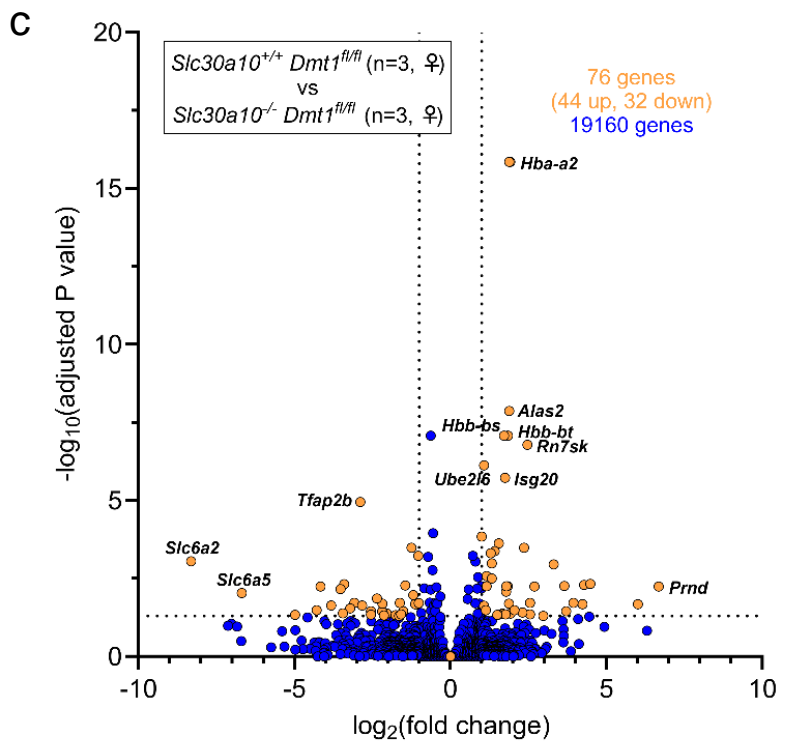
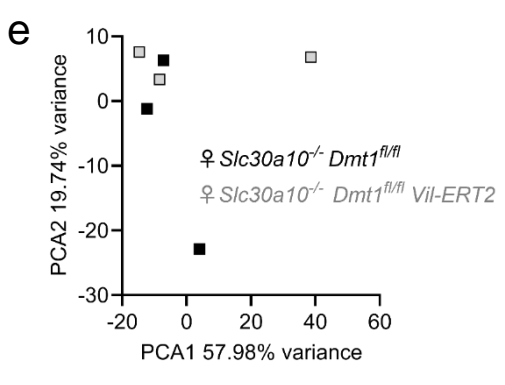
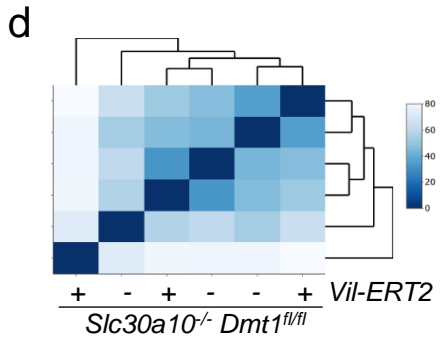
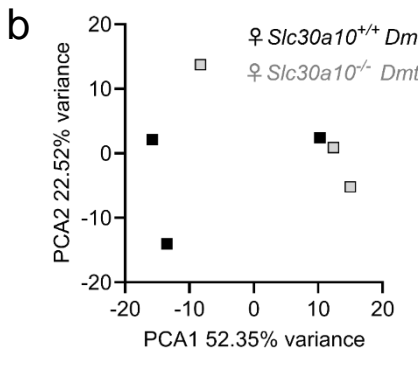
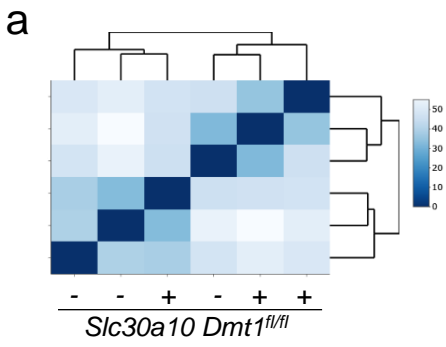


Figure S16

Slc30a10^{+/+} *Dmt1*^{fl/fl}
vs.
Slc30a10^{-/-} *Dmt1*^{fl/fl}

Slc30a10^{-/-} *Dmt1*^{fl/fl}
vs.
Slc30a10^{-/-} *Dmt1*^{fl/fl}
Vil-ERT2

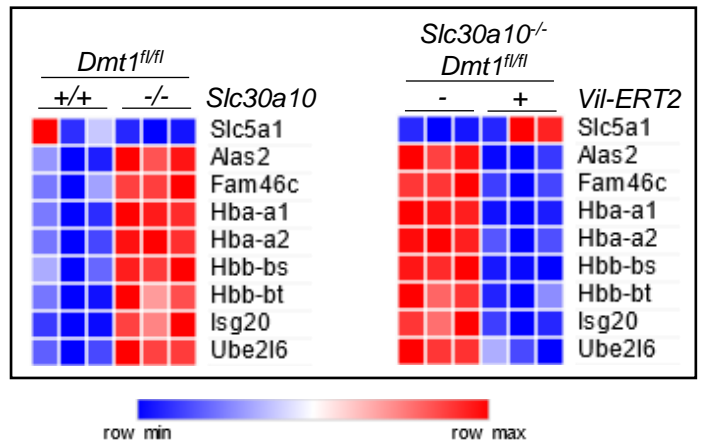
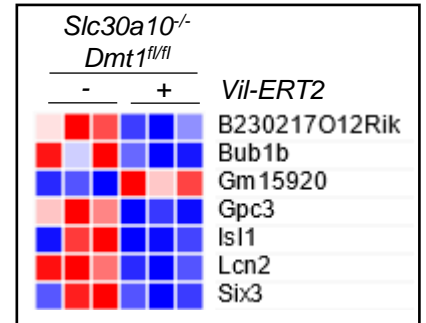
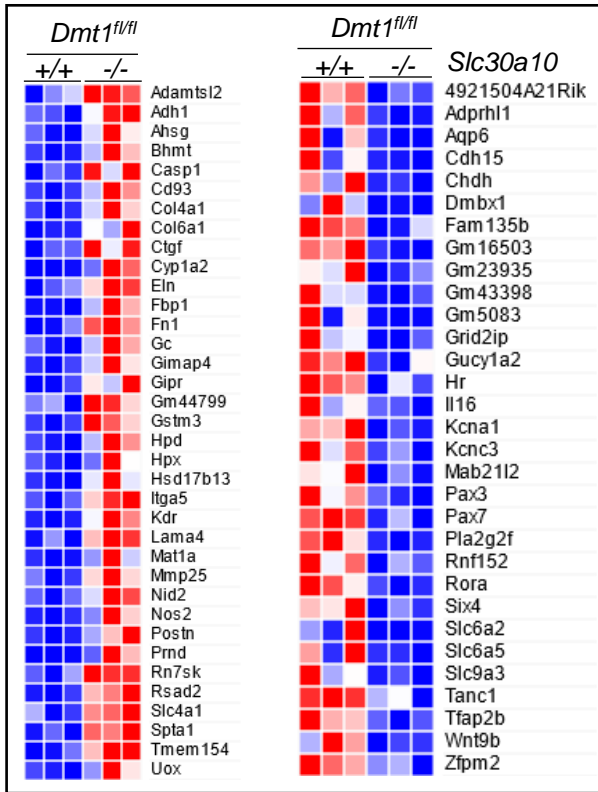
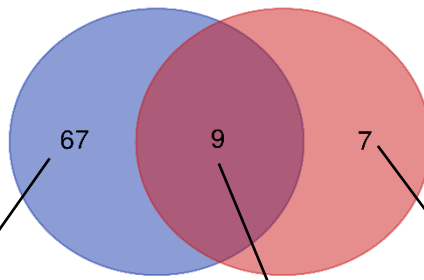


Figure S17

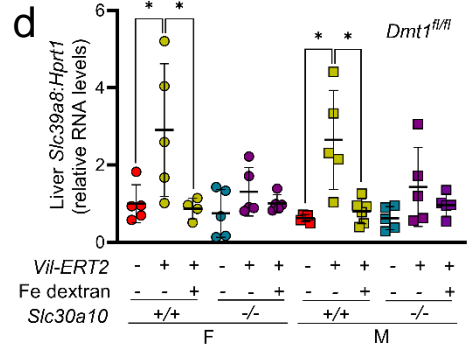
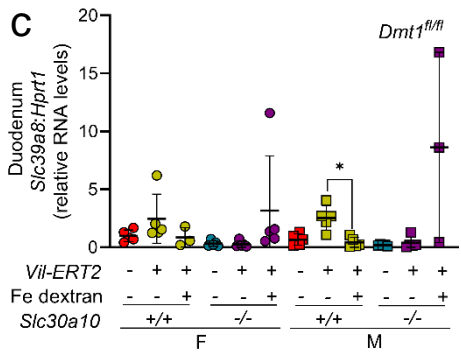
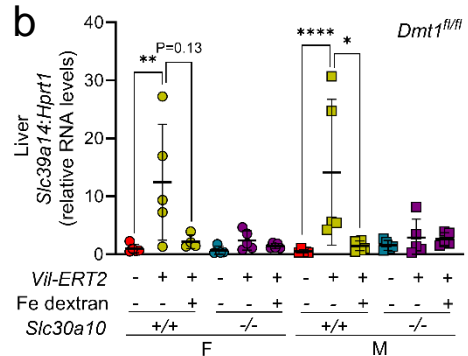
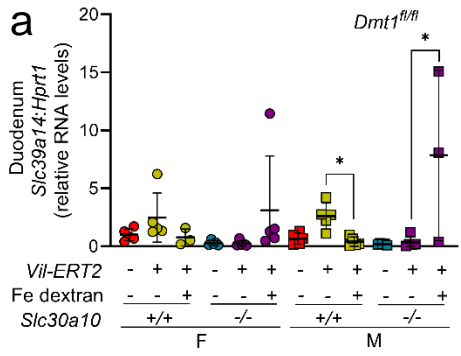


Figure S18

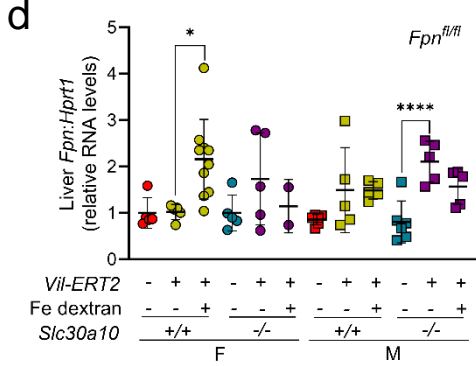
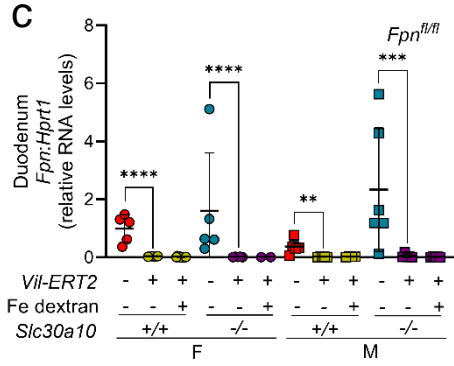
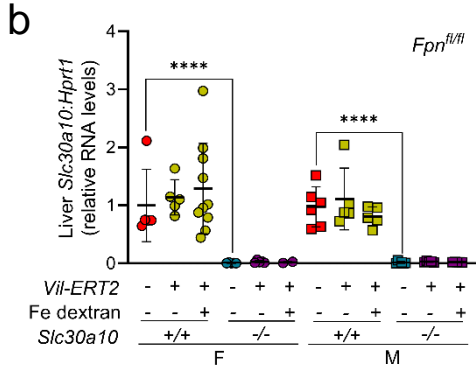
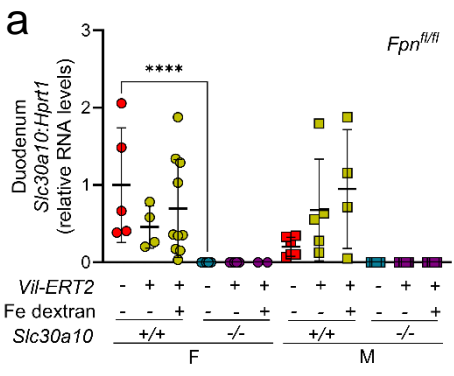
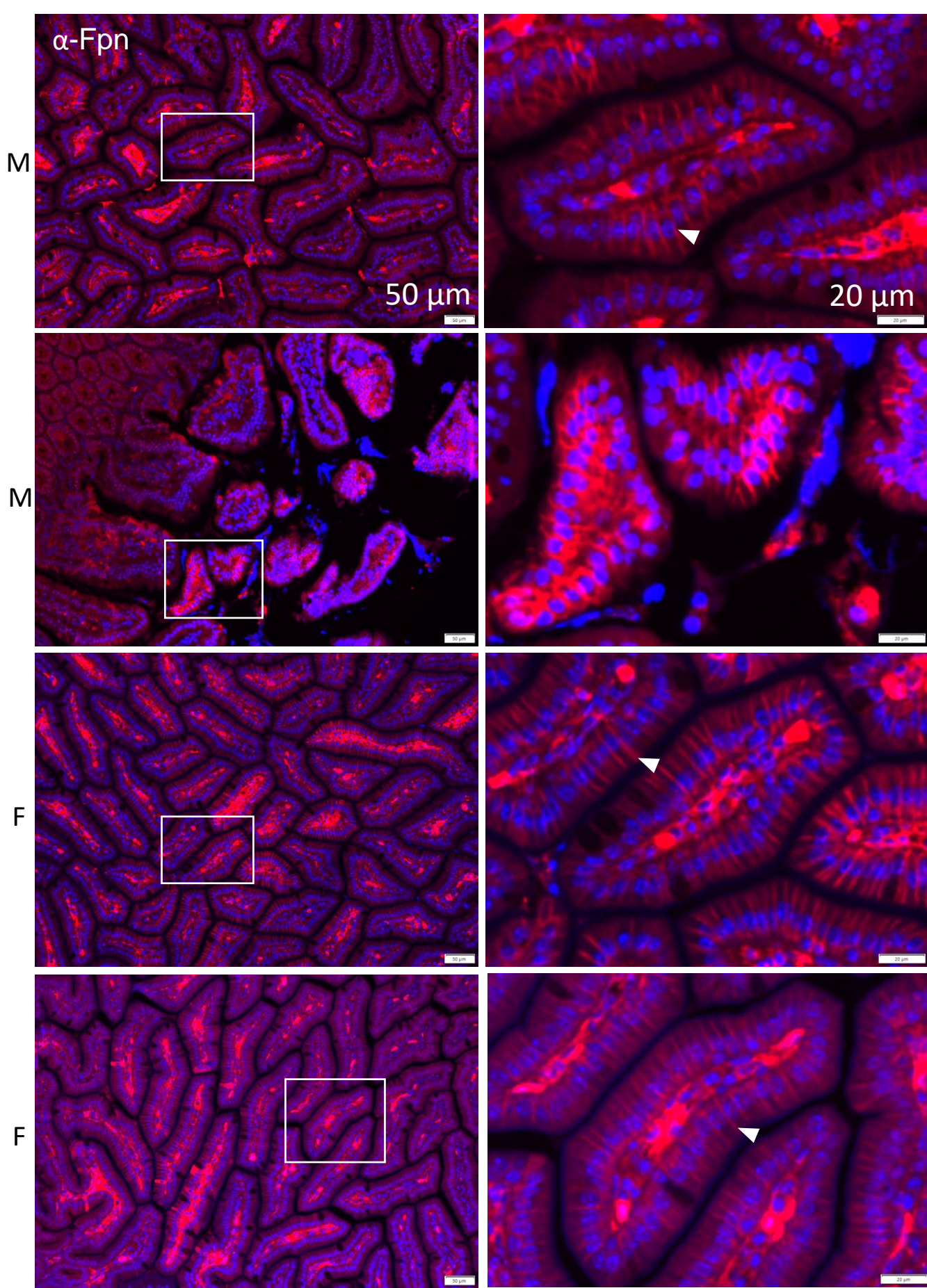
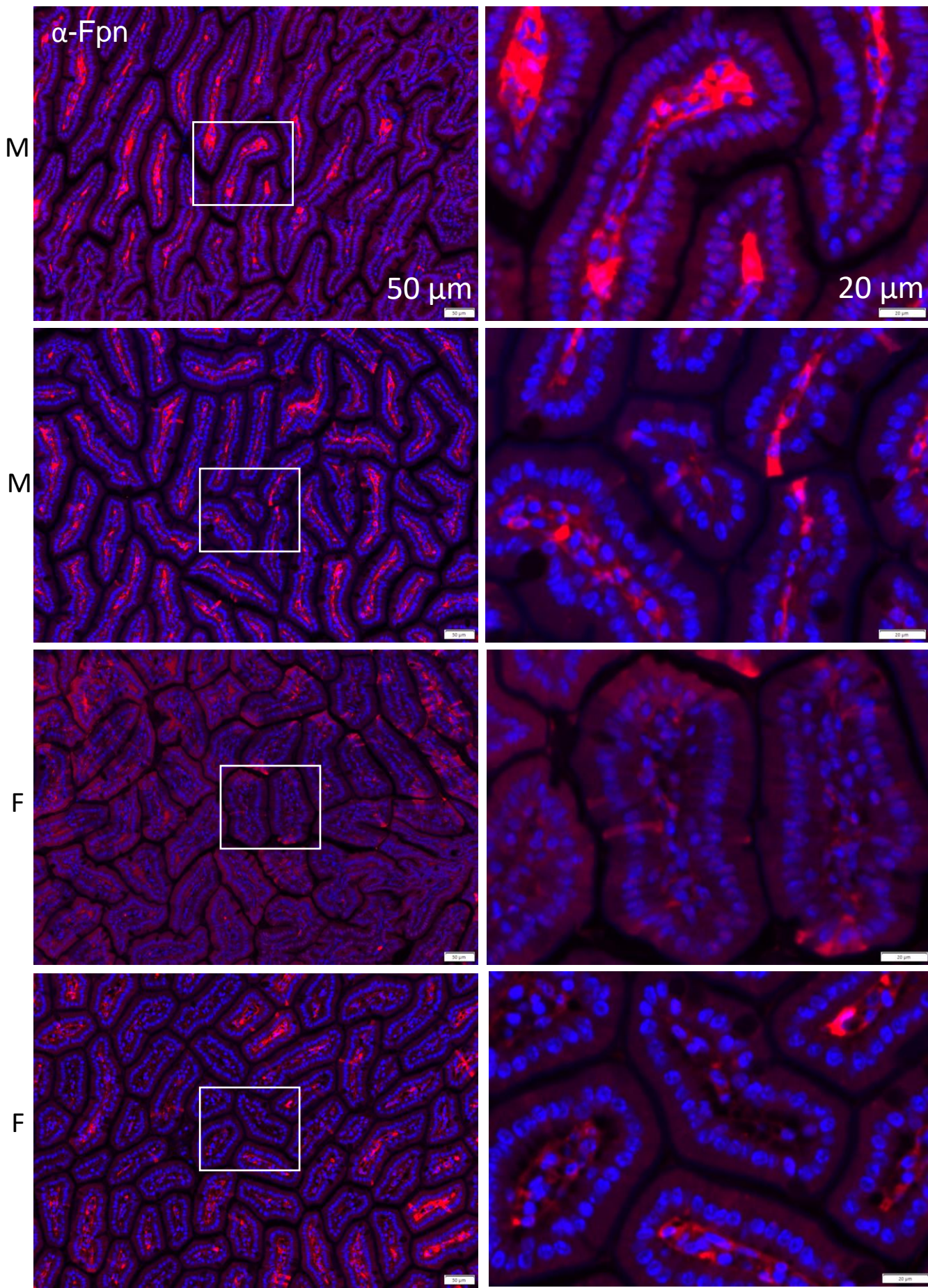


Figure S19



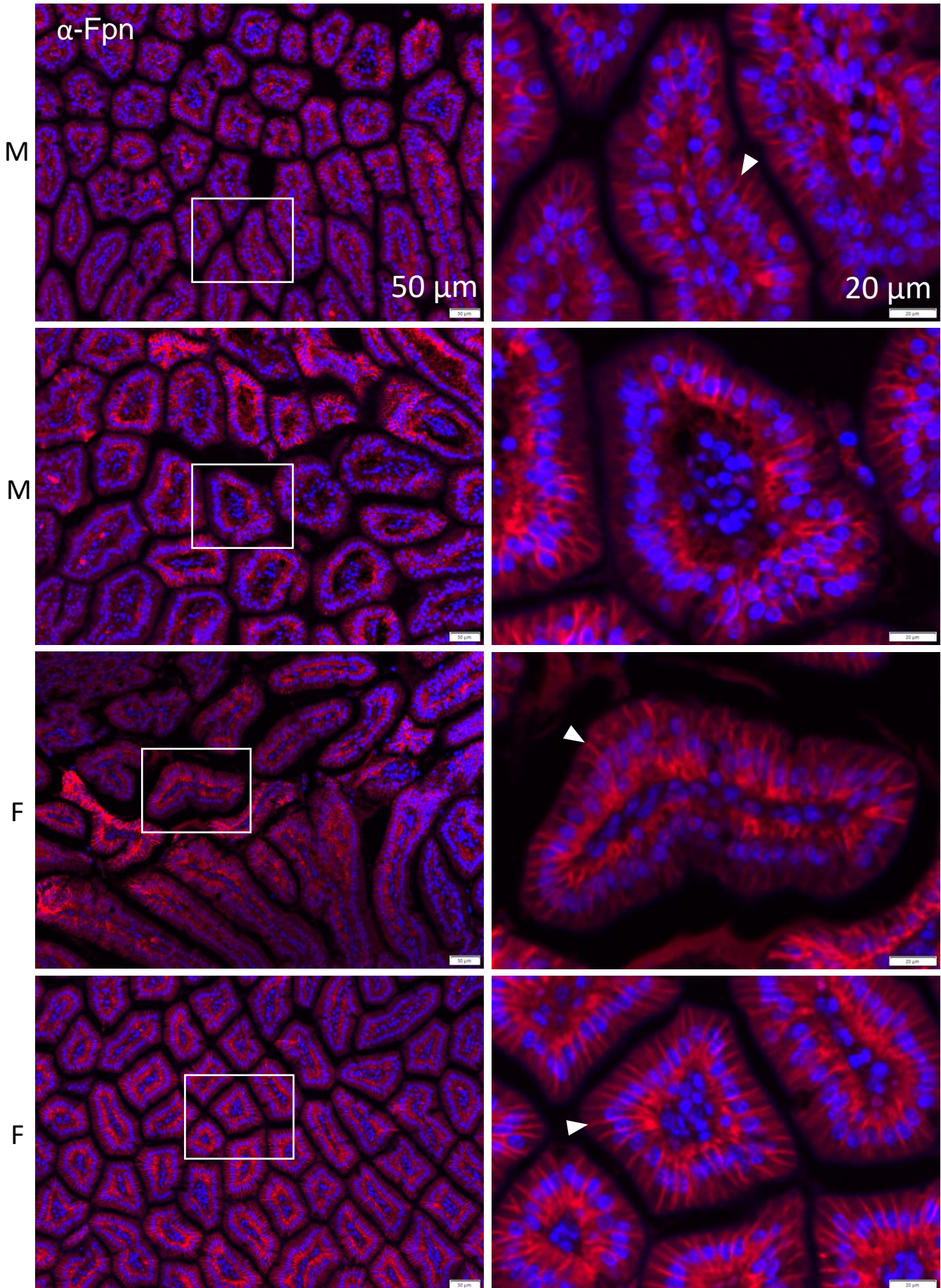
Slc30a10^{+/+} *Fpn*^{fl/fl}

Figure S20



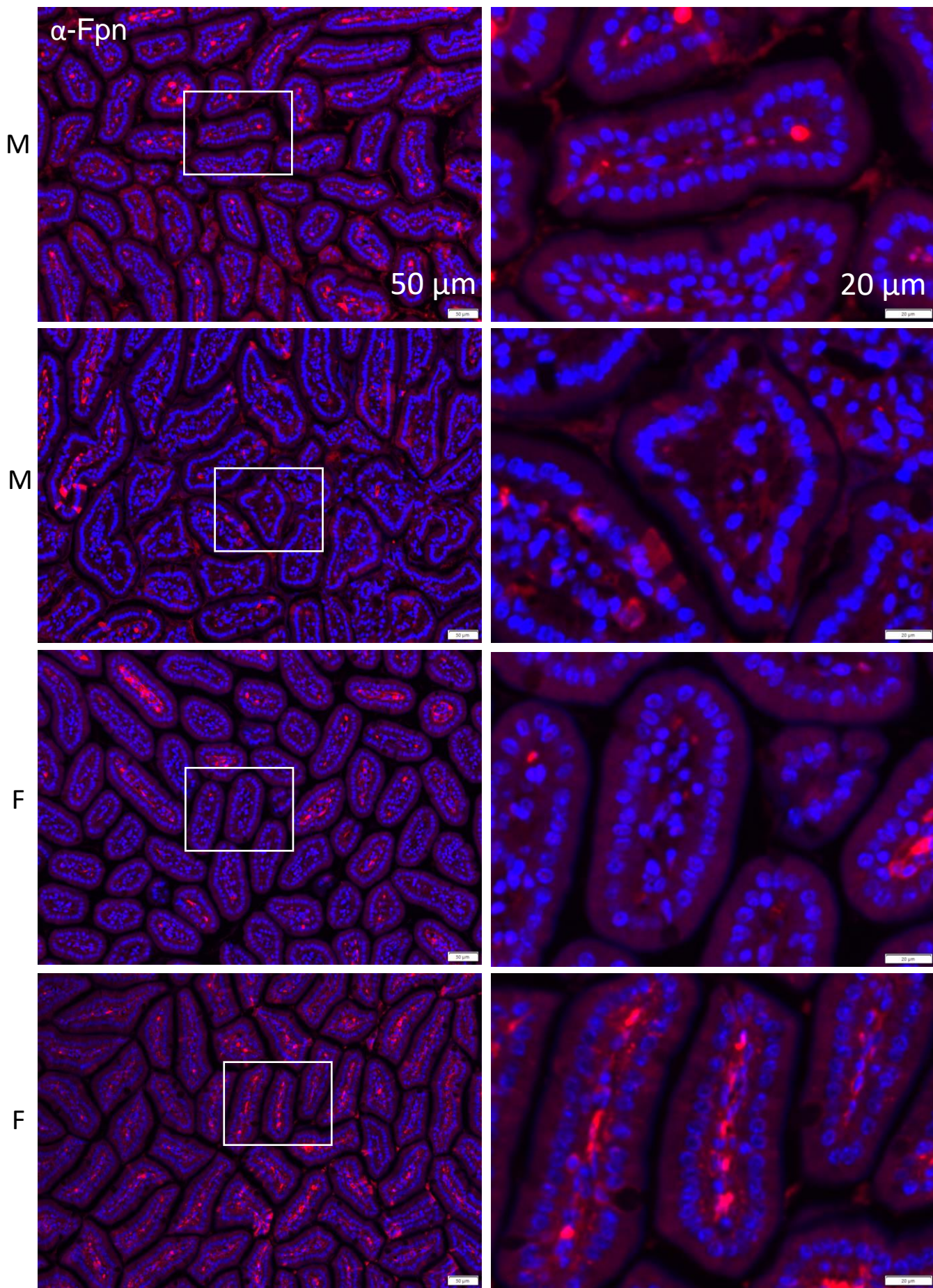
Slc30a10^{+/+} *Fpn*^{fl/fl} *Vil-ERT2*

Figure S21



Slc30a10^{-/-} *Fpn*^{fl/fl}

Figure S22



Slc30a10^{-/-} *Fpn*^{fl/fl} Vil-ERT2

Figure S23

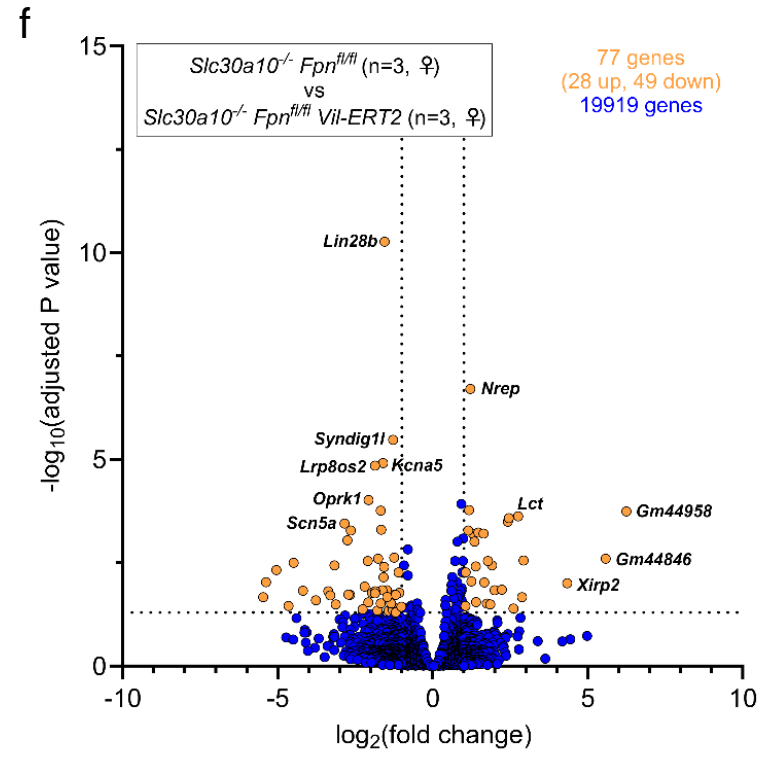
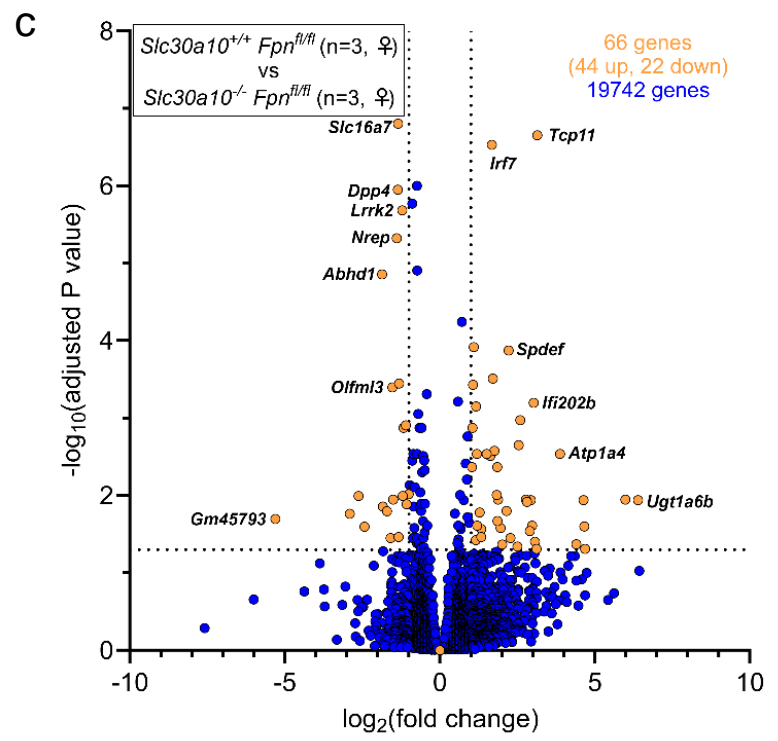
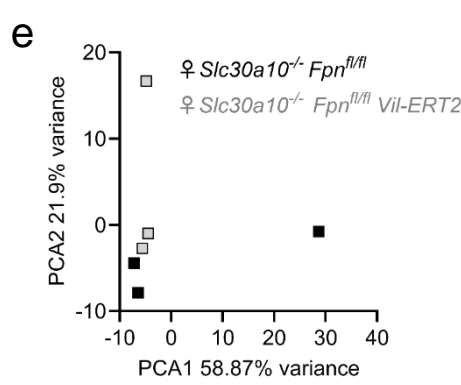
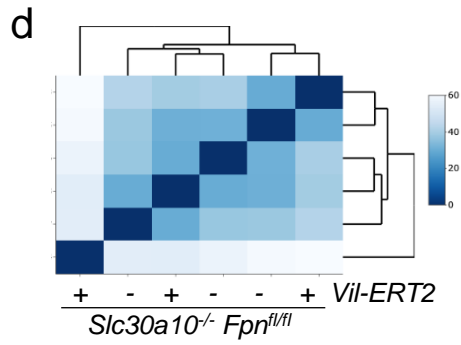
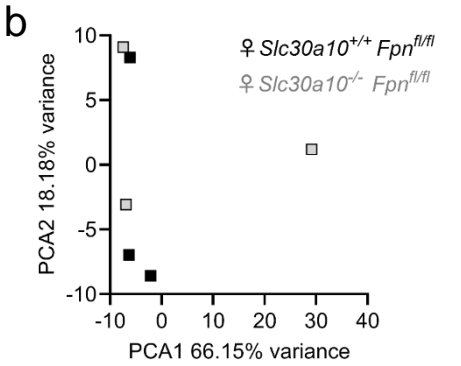
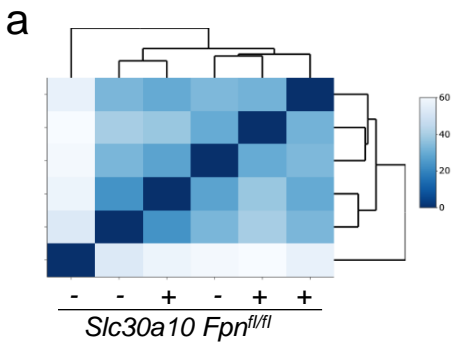


Figure S25

Slc30a10^{+/+} *Fpn*^{fl/fl}
vs.
Slc30a10^{-/-} *Fpn*^{fl/fl}

Slc30a10^{-/-} *Fpn*^{fl/fl}
vs.
Slc30a10^{-/-} *Fpn*^{fl/fl}
Vil-ERT2

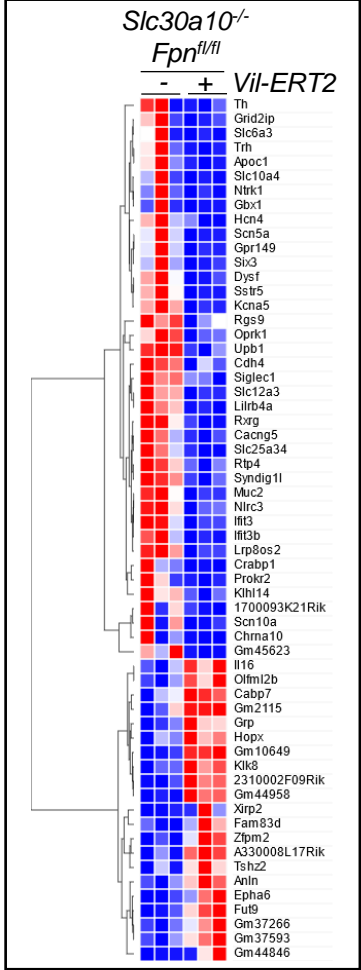
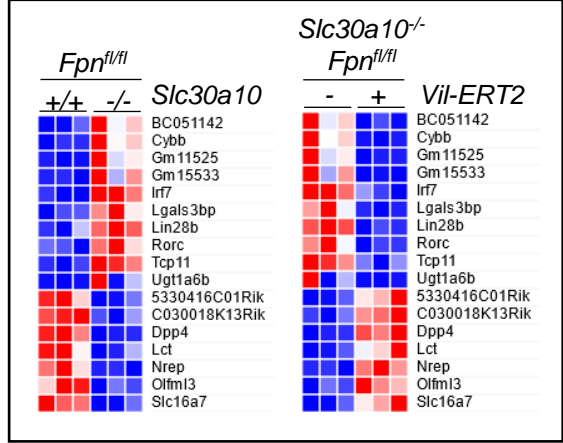
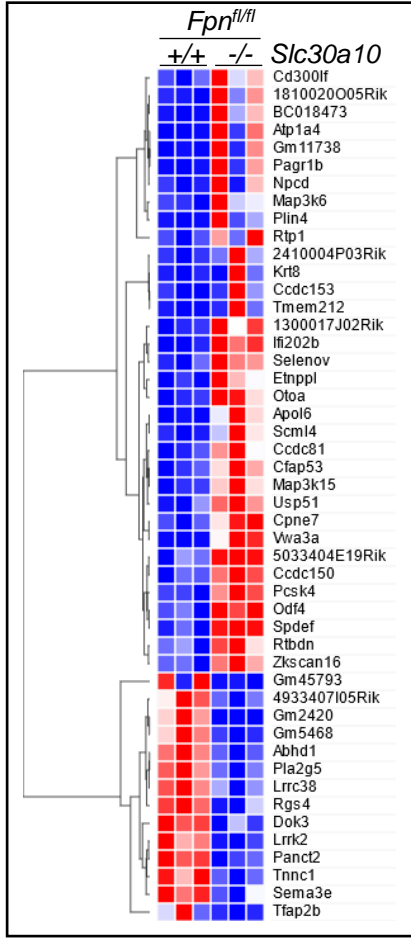
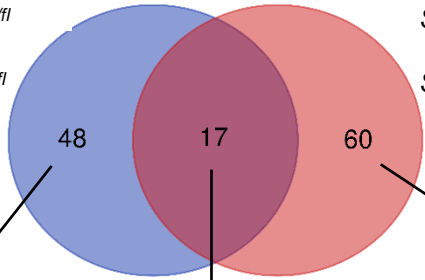


Figure S26

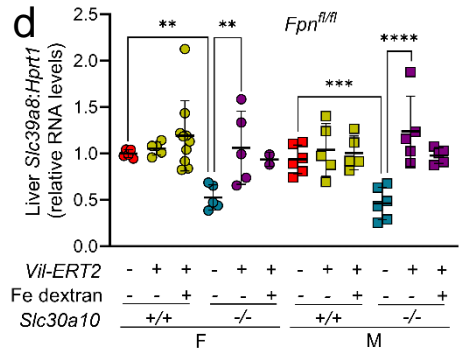
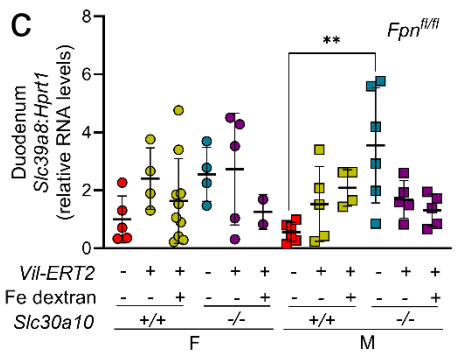
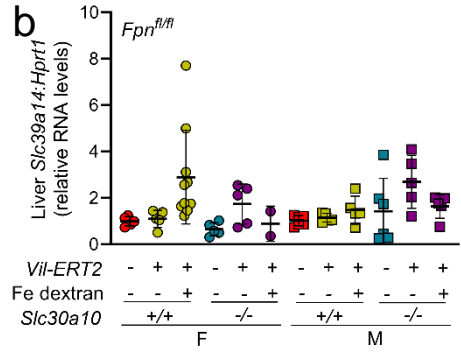
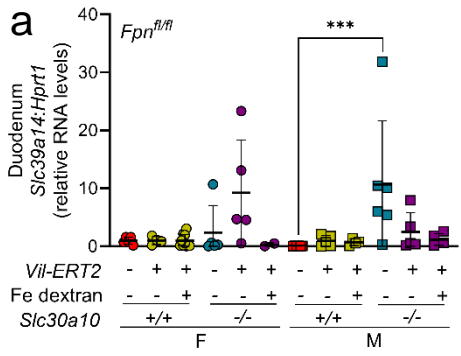


Figure S27

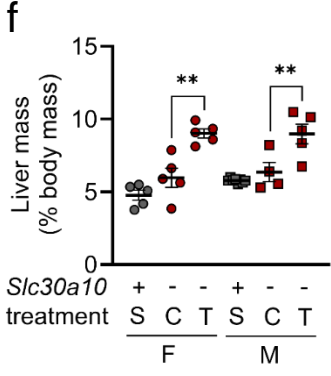
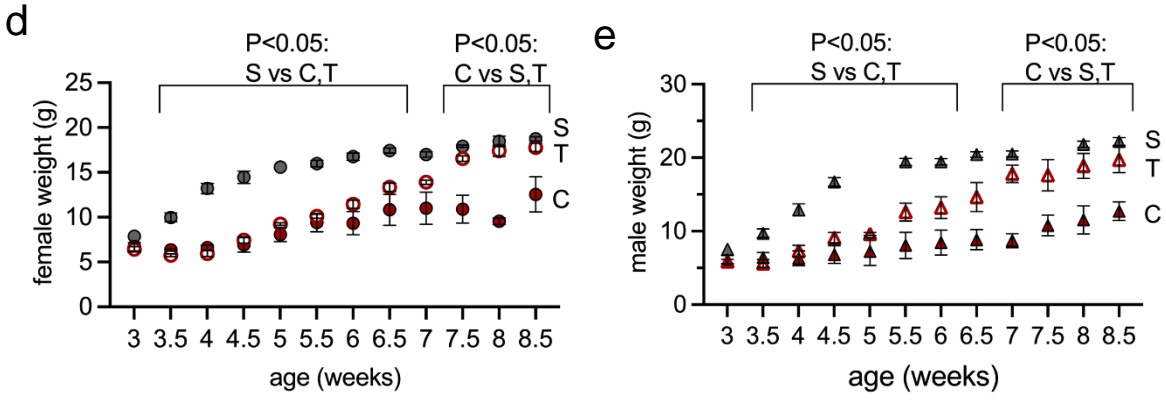
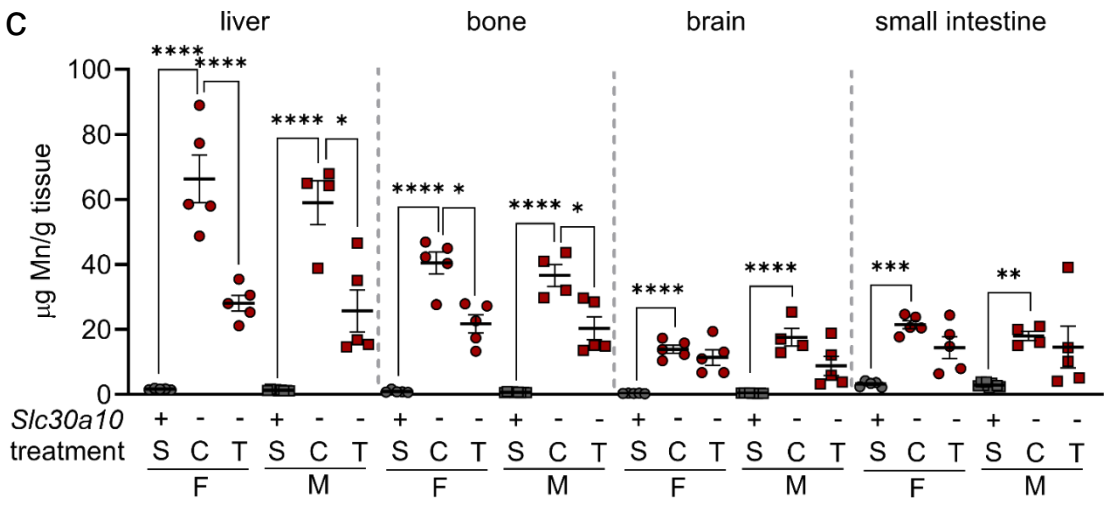
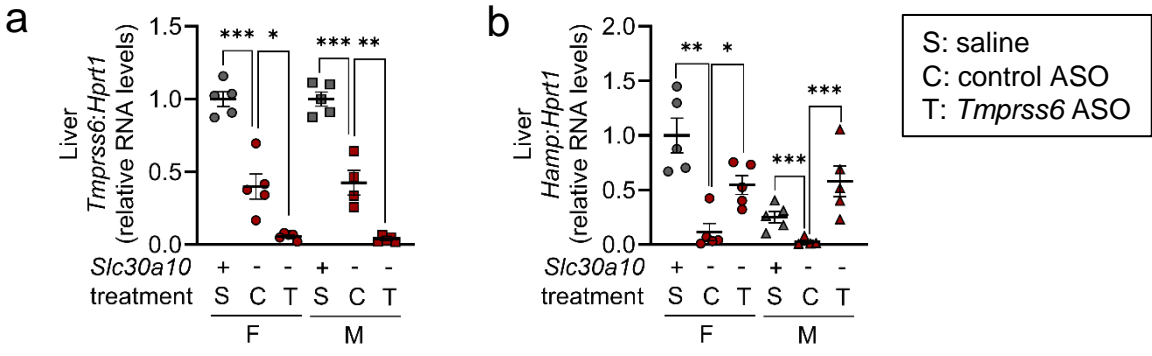


Figure S28

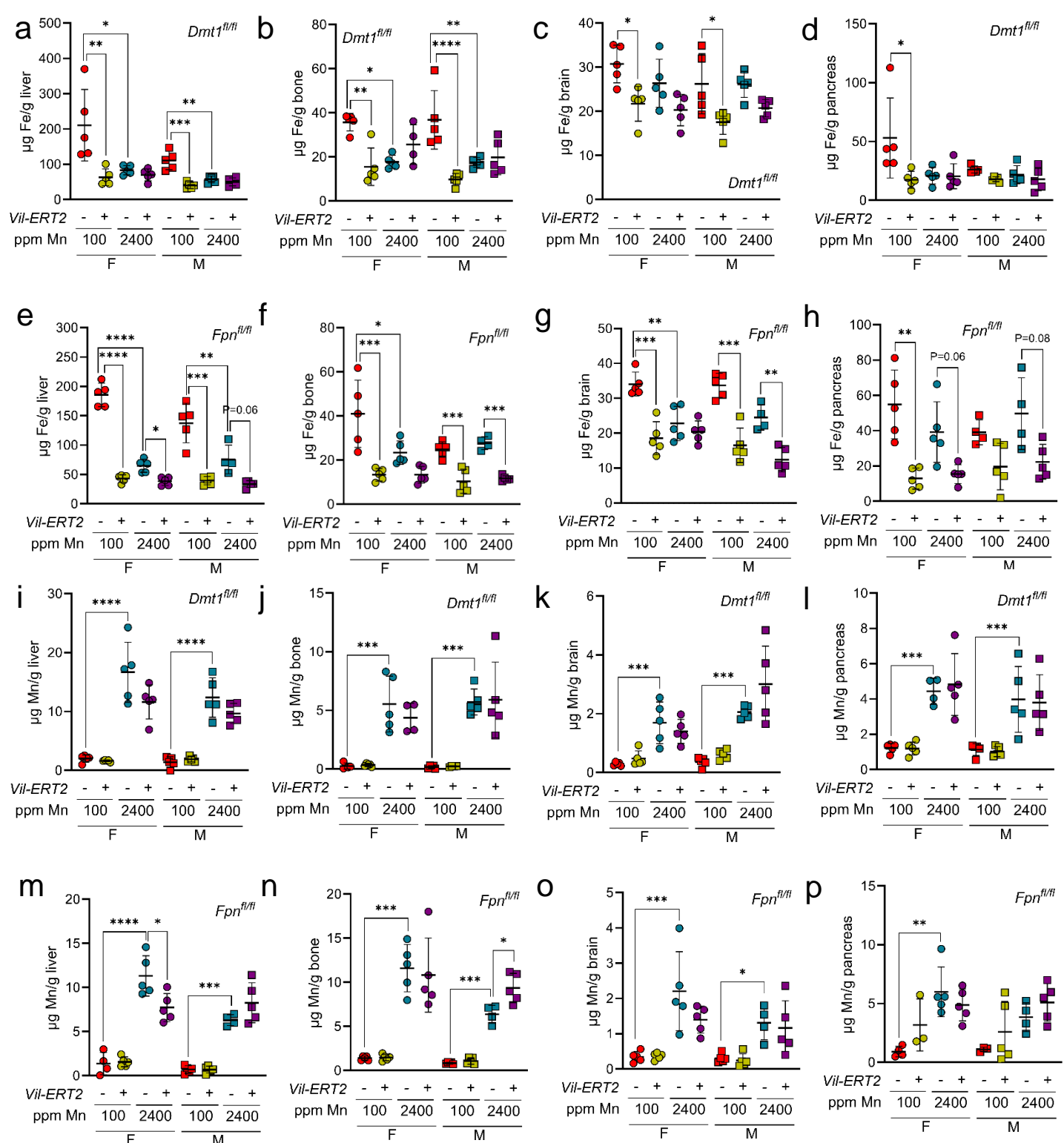


Figure S29

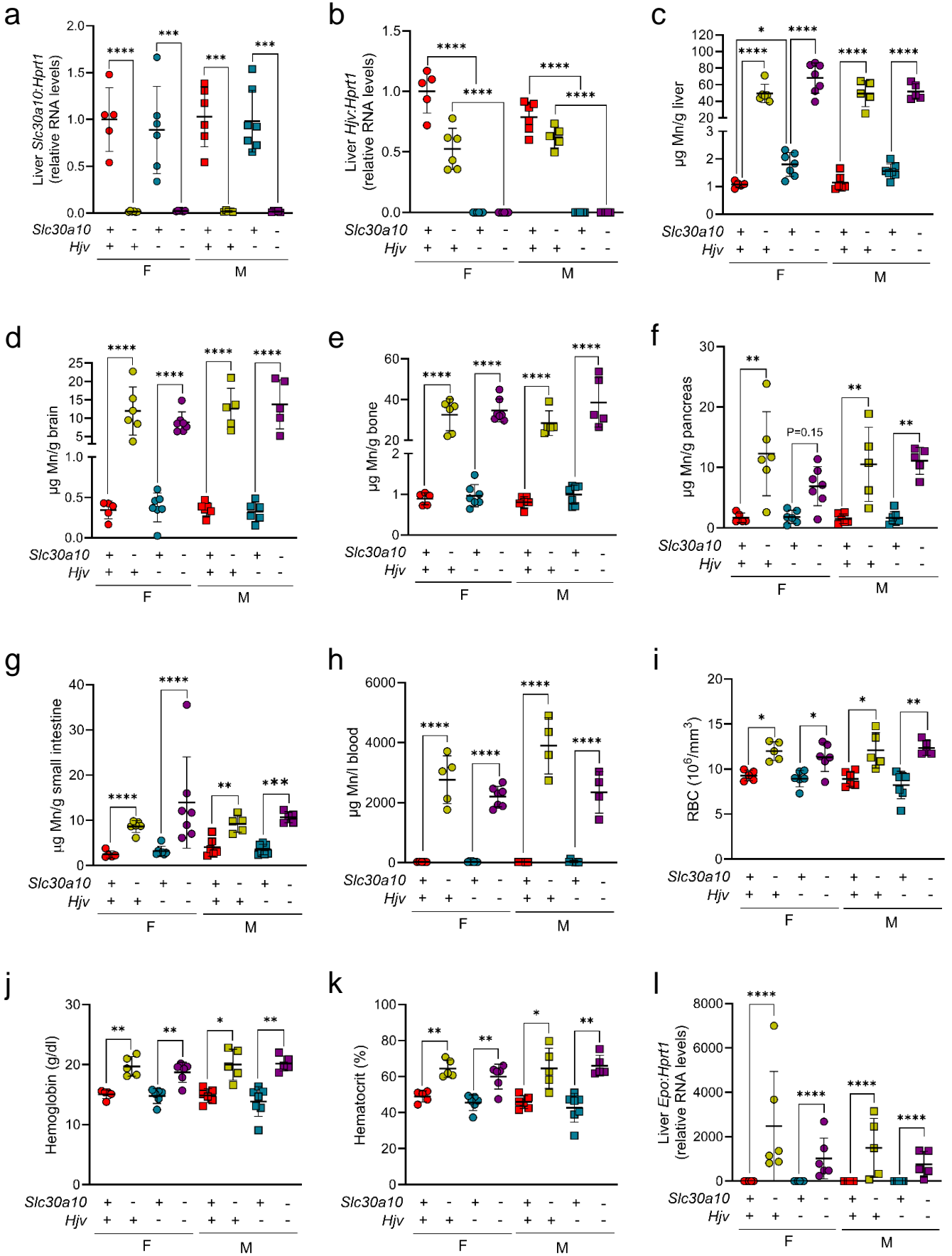


Figure S30

Mn

Fe

Cu

Zn

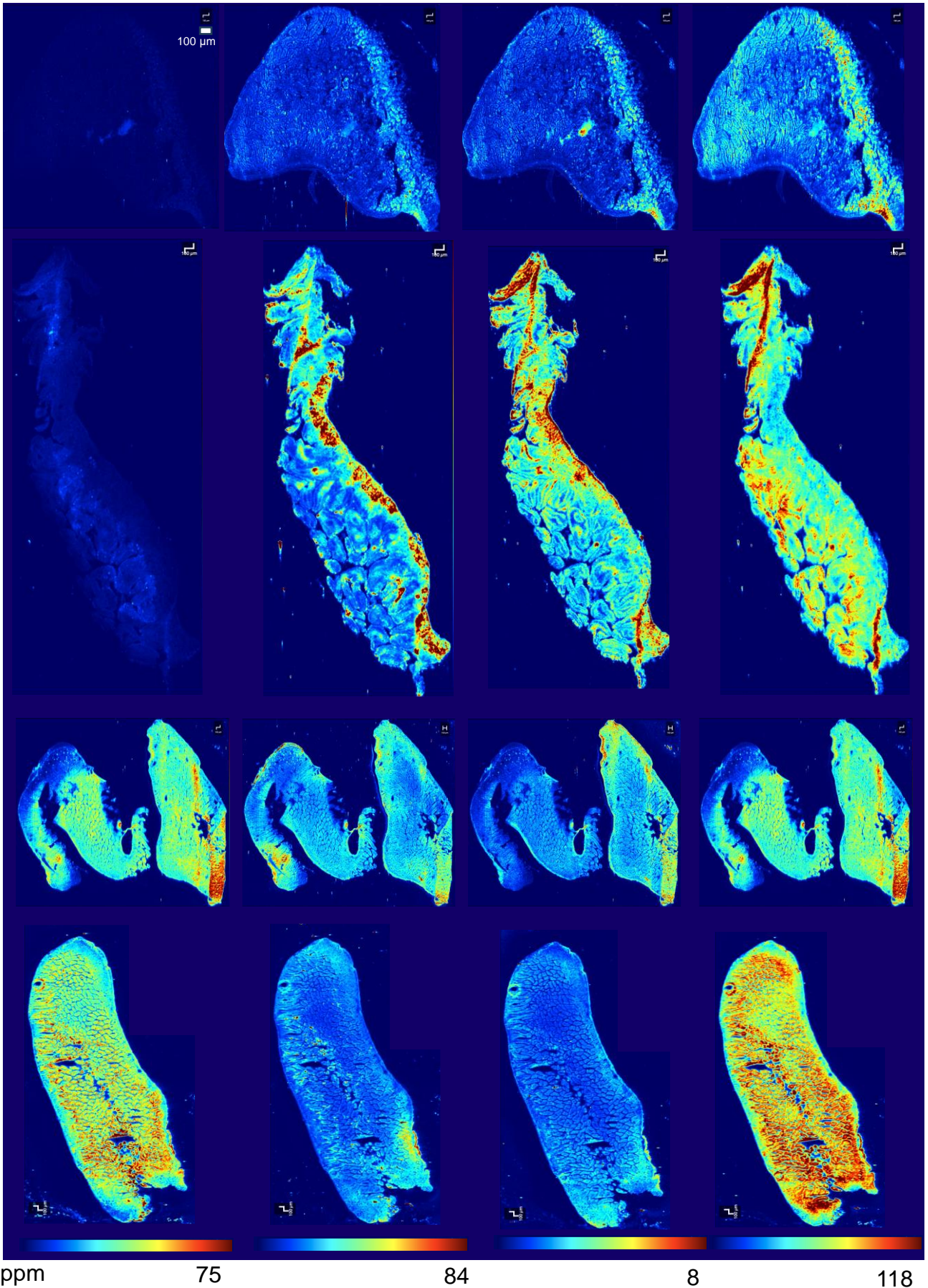
*Slc30a10^{+/+} Hjv^{+/+}**Slc30a10^{+/+} Hjv^{-/-}**Slc30a10^{-/-} Hjv^{+/+}**Slc30a10^{-/-} Hjv^{-/-}*

Figure S31

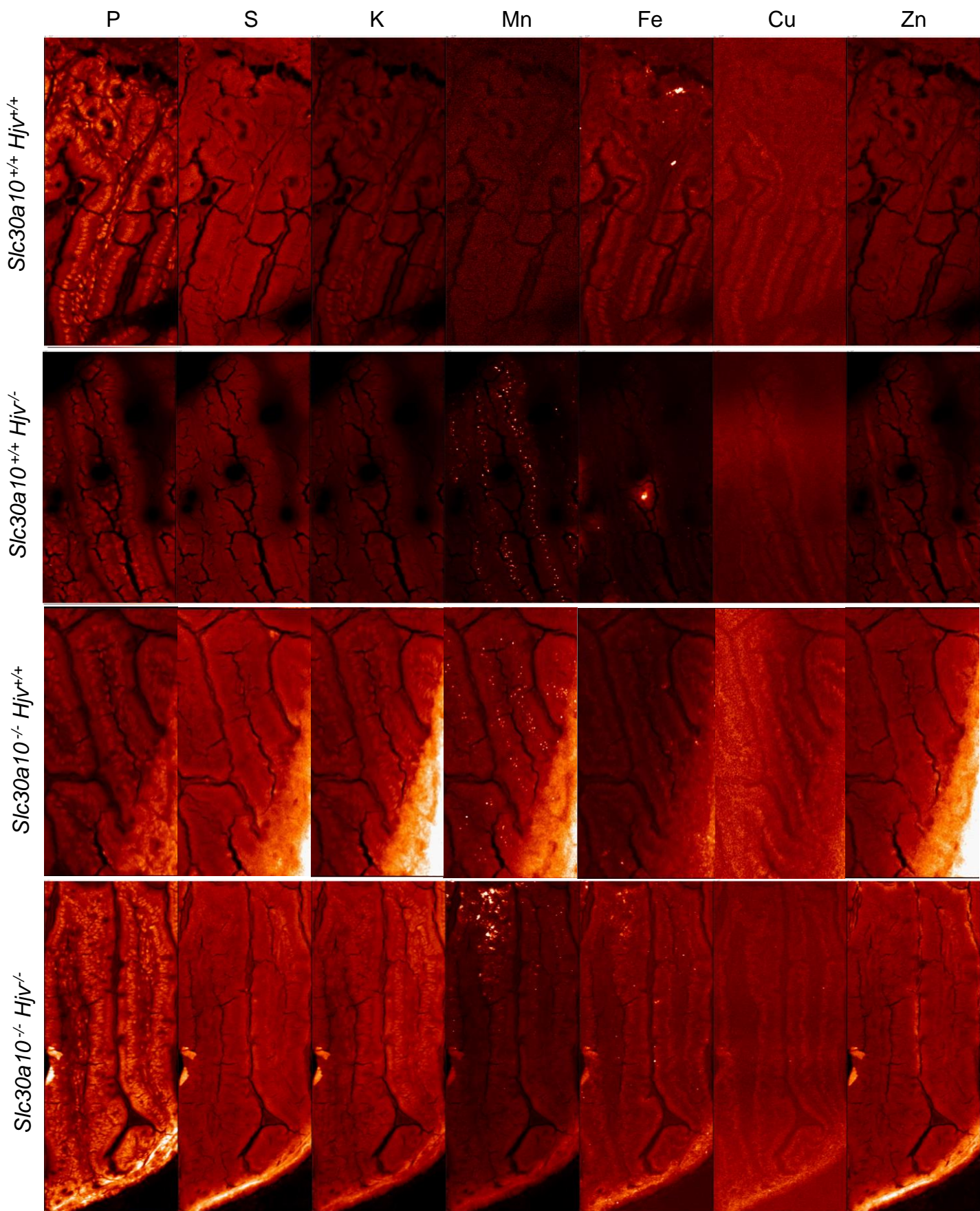


Figure S32

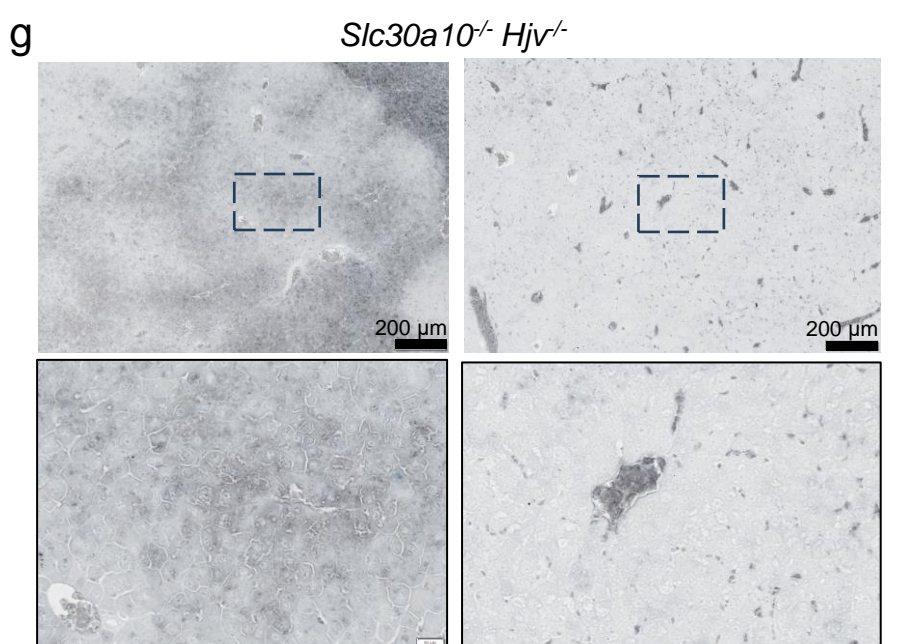
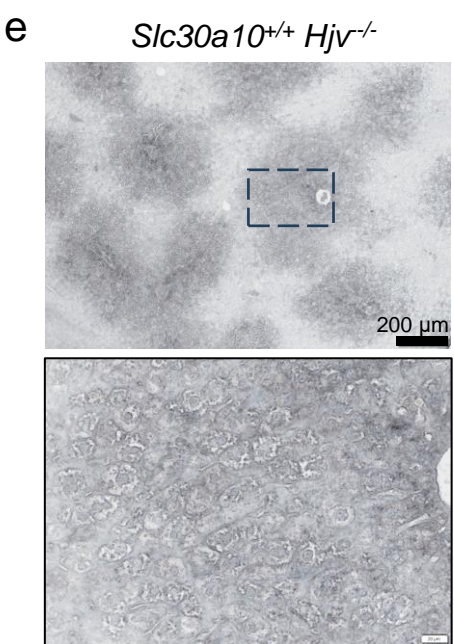
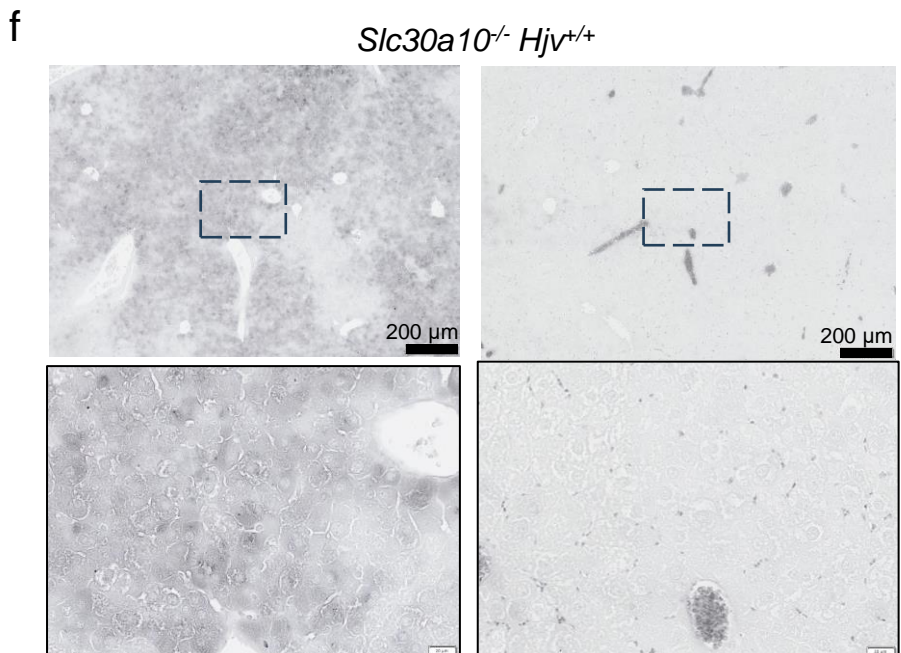
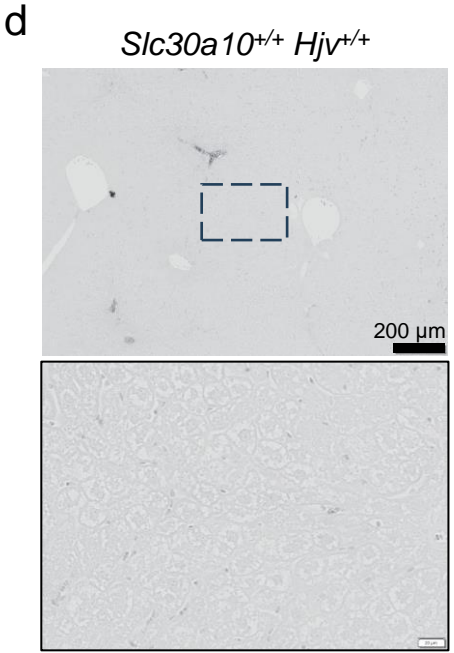
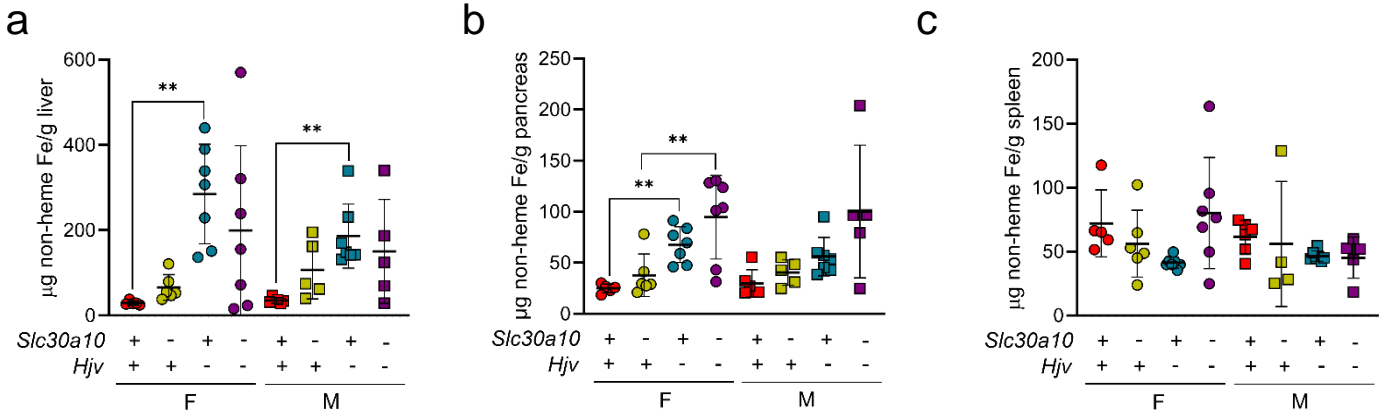


Figure S33

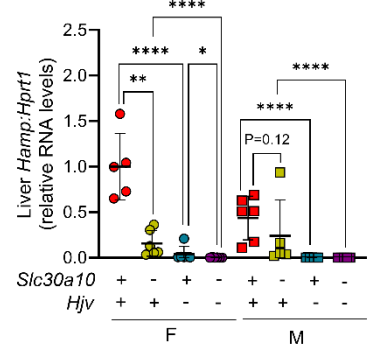
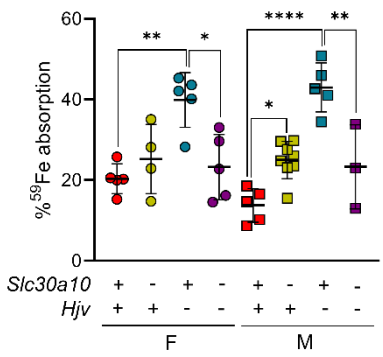
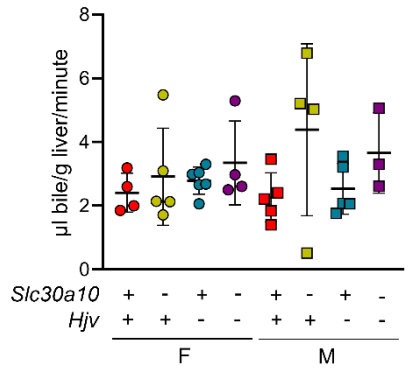
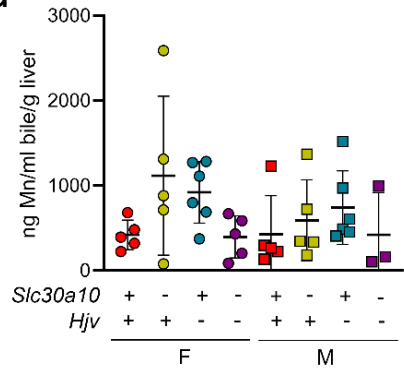
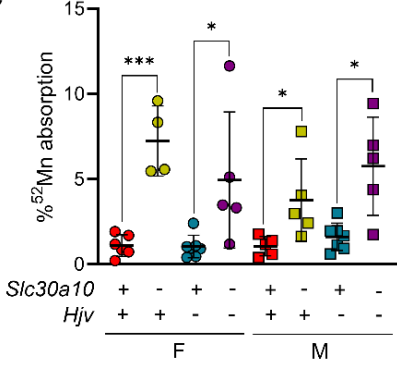
a**b****c****d****e**

Figure S34

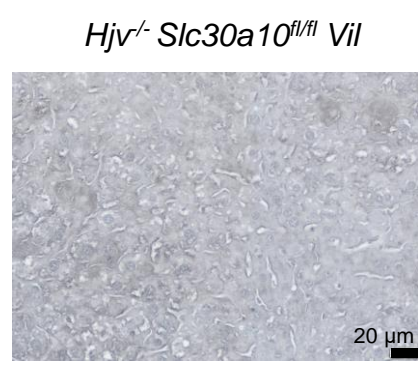
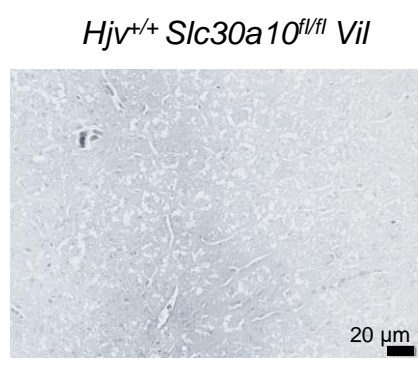
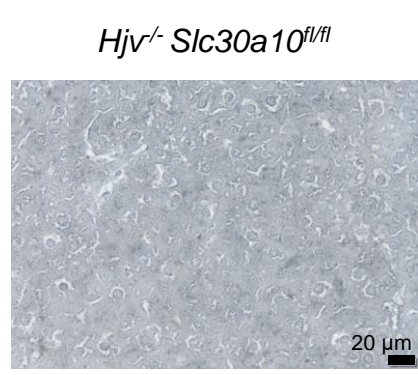
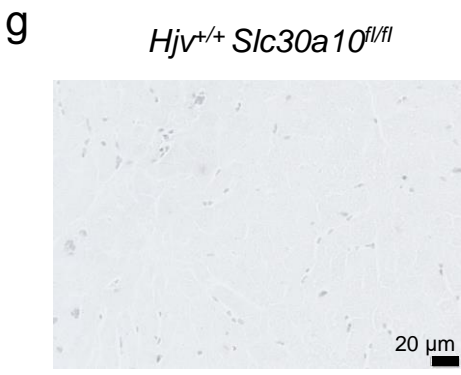
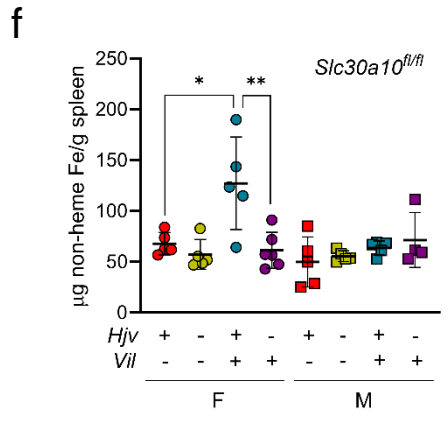
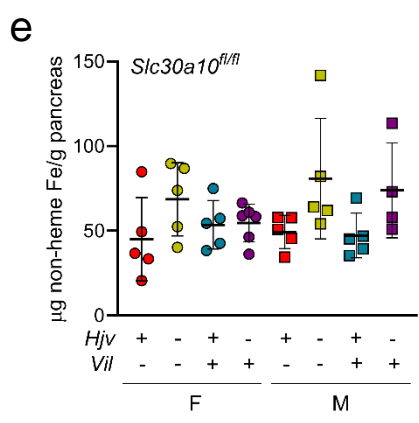
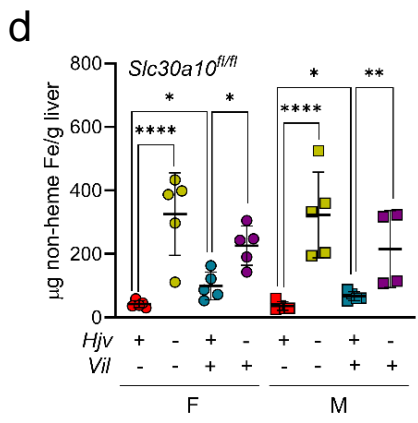
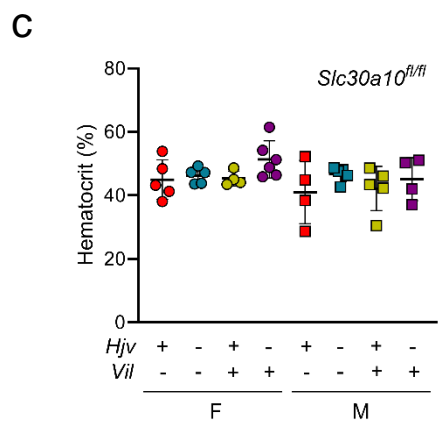
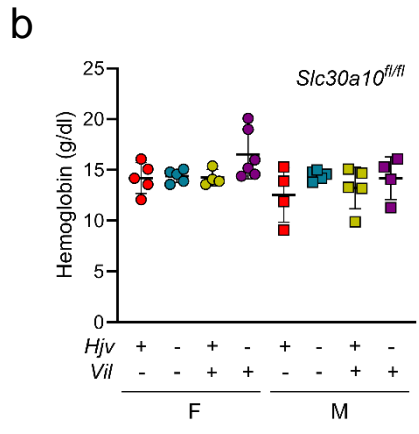
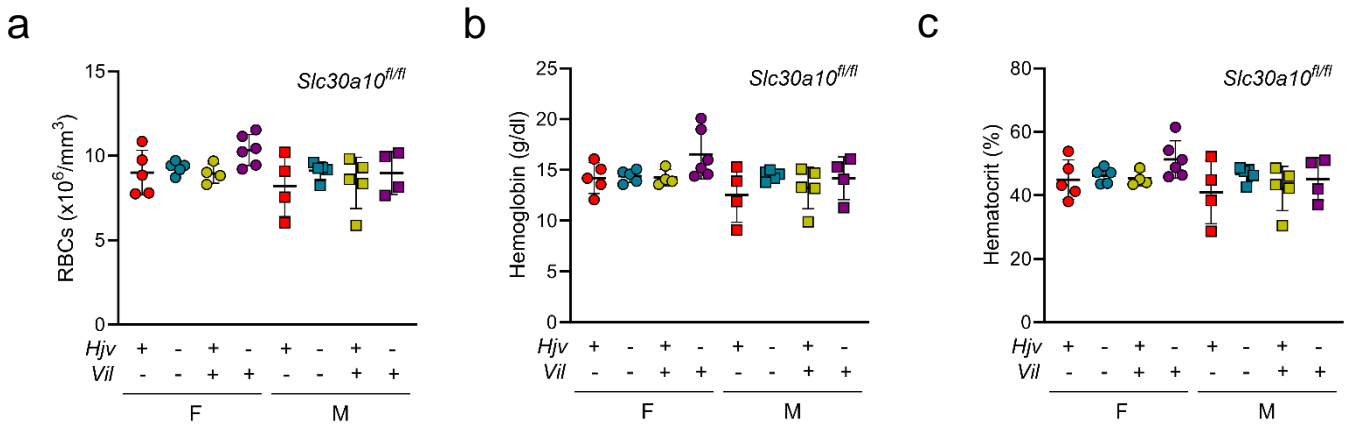


Figure S35