Heme exporter Flvcr1 regulates expansion and differentiation of committed erythroid progenitors by controlling intracellular heme accumulation

Flvcr1a
required for the expansion of committed erythroid progenitors

Flvcr1b
crucial for terminal differentiation

Heme export represents a tightly regulated process that controls erythropoiesis

FLVCR1a
down-regulation
↓ proliferation
↓ differentiation
↑ cytosolic heme loading

FLVCR1a/1b
down-regulation
↓ proliferation
↓ differentiation
↑ mitochondria heme loading

Mercurio et al., Haematologica, 2015