

# Heme oxygenase-1 deficiency alters erythroblastic island formation, steady-state erythropoiesis and red blood cell lifespan in mice

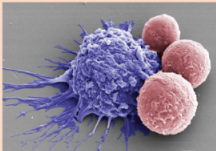


BALB/c 8-14 week-old  
Heme oxygenase-1 deficient

## Steady-state erythropoiesis alteration in bone marrow

abnormal adhesion molecule expression in macrophages and erythroid cells

↓ erythroblastic island formation



## Red blood cell changes

↓ red blood cell size

↓ hemoglobin content

↑ circulating red blood cells

## Circulating red blood cells oxidative stress increase

↑ lifespan of oxidatively stressed erythrocytes

↓ frequency of macrophages expressing TIM4 in bone marrow, spleen & liver

ameliorated microcytic anemia