A Proteomics Based Approach to Determine the Role of the Cardiac Neural Crest

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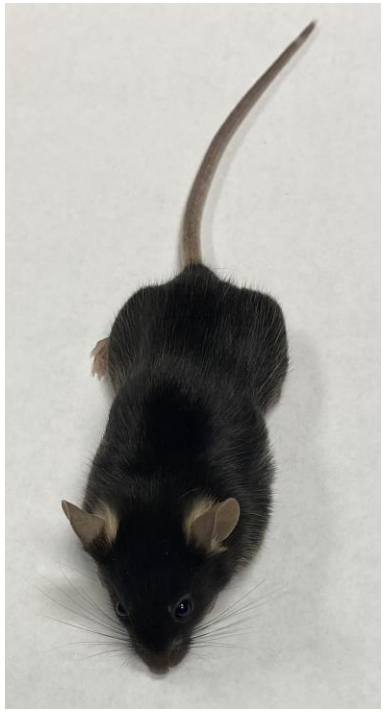
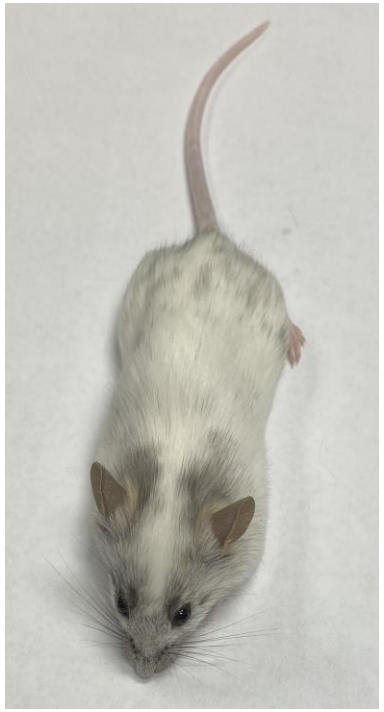


Wildtype Mouse



W^{44}/ W^{44} Mouse

Biological Question

Do c-KitW^{44} mutant mice exhibit cardiac neural crest abnormalities? If so, can these cardiac abnormalities be attributed to biological sex differences?

This is an important question to study because the neural crest is instrumental in fetus development in mammals.

Males and females differ in their prevalence, treatment, and survival of cardiovascular disease.

c-KitW^{44} mice exhibit defects in germ cells and melanocytes. Do they exhibit defects in the heart?

Cardiac Proteome Workflow

Dissect heart from WT and W^{44} mice

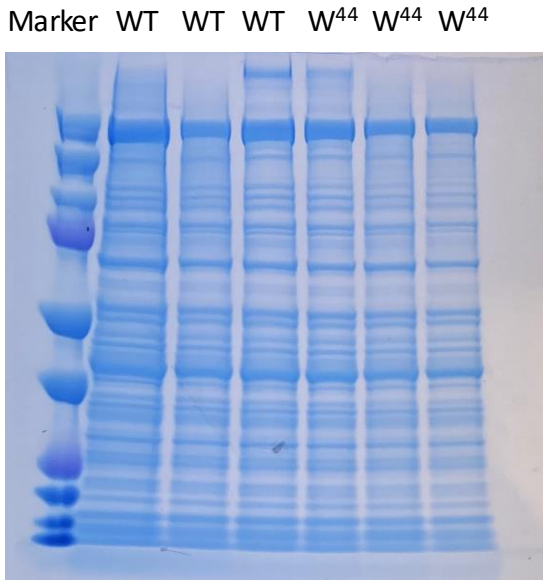
Freeze with liquid nitrogen and grind into powder

Sonicate heart cells

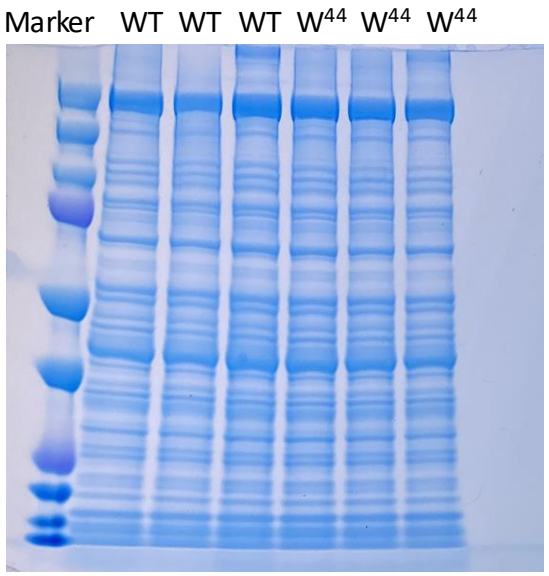
Remove all extracellular matrix, DNA, and RNA

Pellet heart proteins and Coomassie protein gel to test for effective protein isolation

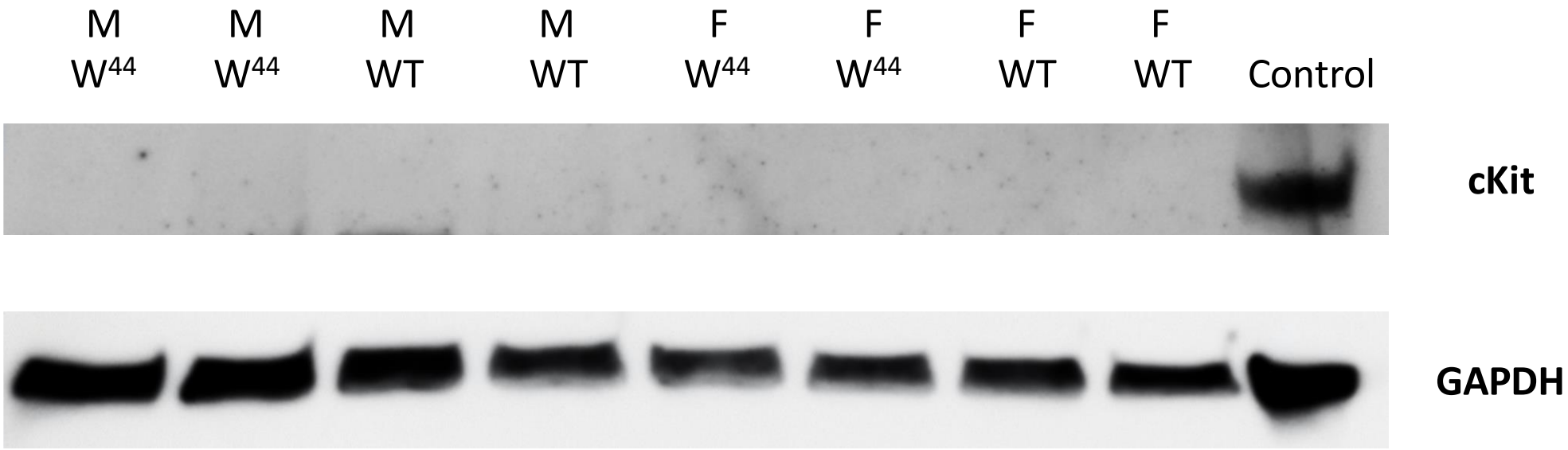
Male



Female



c-Kit is Not Expressed in the Adult Heart



Results