

# Transgenic Mice Over-Expressing Caveolin-3 (M-Caveolin) within the Cardiac Myocyte

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## TECHNOLOGY DESCRIPTION

Caveolins are the principal protein components of caveolae, or “little caves,” which are 50 to 100 nm invaginations found in most cell types and represent appendages or subcompartments of plasma membranes. UC San Diego researchers have created a transgenic mouse for over-expressing caveolin-3 (M-caveolin) specifically within the cardiac myocyte.

Caveolin-3 is one of the proteins that regulate signaling pathways and is thought to function in cardiac protection (ischemic preconditioning). Associated studies indicate that the novel caveolin-3 over-expressing mouse is resistant to myocardial ischemia/reperfusion injury, suggesting that caveolin-3 as a potential therapeutic for patients undergoing cardiac surgery or at high risk for myocardial infarction.

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