TRANSGENIC MOUSE LINES WITH MARKERS OF MUSCLE DEVELOPMENT

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Myl-CFP Mice

The coding sequence for the enhanced CFP was inserted downstream of ~5kb of putative regulatory sequences from the mouse myosin Type I heavy chain gene. Transgenic mice were generated by pronuclear injection using standard methods.

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MyIIA-RFP Mice

A ~100kb genomic fragment containing the MHC-IIA gene and adjacent sequences was transferred from a P1-based artificial chromosome into a bacterial artificial chromosome (BAC) vector, pBeloBAC11, using bacterial homologous recombination-based gap repair. The loxP site in the pBeloBAC11 vector had previously been replaced with a gene for ampicillin resistance. In parallel, a Frt-Neo-Frt (FnF) cassette was inserted into the pDsRed2-N1 vector (BD Biosciences Clontech). The DsRed and Neo sequences were targeted to the translation start site of MHC-IIA in the BAC, using Neo to select recombinants. Finally, the FnF selection cassette was excised by induction of Flp recombinase in the bacteria.

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Publication: Mouse transgenic lines that selectively label Type I, Type IIA, and Types IIX+B skeletal muscle fibers