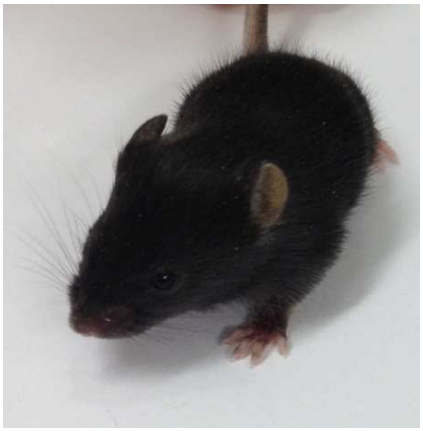
SCID/BlAJ MOUSE

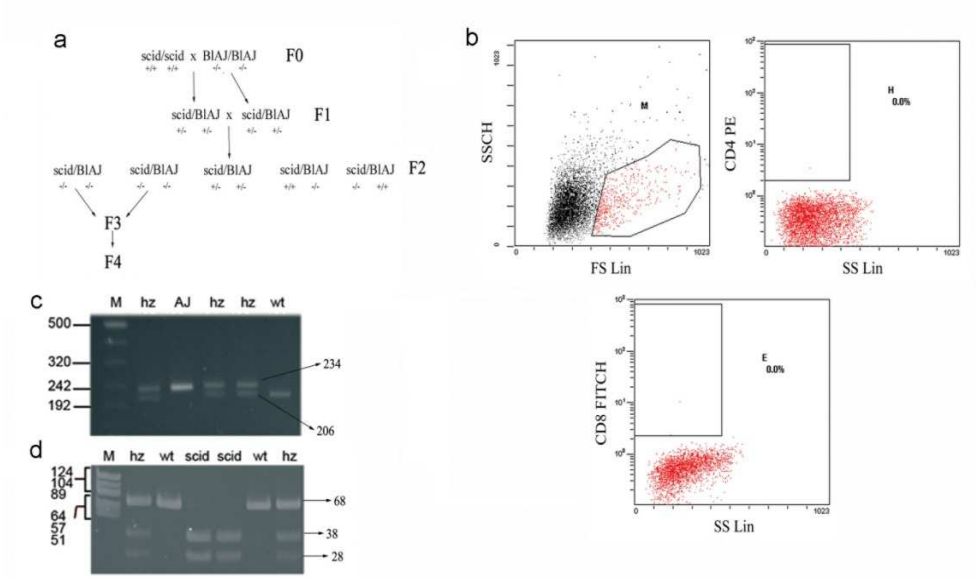


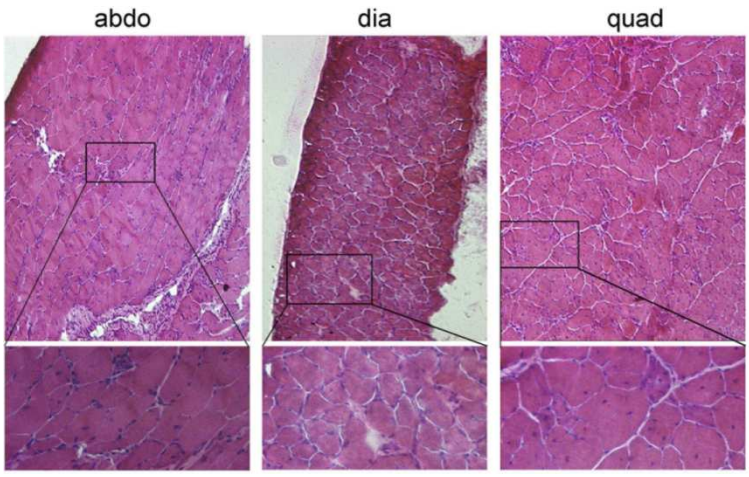
SCID/BlAJ MOUSE	
CODE	ramY_BlAJ
BREEDING	A cross between CB17/lcr-*Prkdc*^{scid}/lcrCrl and BlAJ
COAT COLOR	Brown

RESEARCH APPLICATION

Scid/BlAJ represents a suitable model for preclinical studies concerning stem cell transplantation.

DESCRIPTION





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BlAJ mice were bred to the *C.B-17/lcr scid/scid* mice. The resulting F1 (*Scid/blAJ* +/-) mice have been crossed to obtain F2 homozygotes for both loci: *dysf* and *Scid*. Two additional generations of *Scid/blAJ* -/- have been performed, until F4. CD8+ or CD4+ cells were not found in the blood of *Scid/blAJ* mice. *BlAJ* mice have been characterized for the presence of specific ETn retrotrasposon. In wild type mice, the length of DNA fragment for dysferlin is 206-bp. In heterozygous mice, two bands of 242-bp and 206-bp have been obtained, by using the primers for dysferlin with one specific for the ETn retrotrasposon. Homozygous mice have been characterized by only one band of 242-bp. Normal mice are characterized by only one 68-bp DNA fragment. In homozygous mice, 2 fragments of 28-bp and 38 bp have been obtained while in heterozygous ones 3 fragments of 68-bp, 38-bp and 28-bp have been reported.

Scid/BlAJ muscles show the presence of degenerating and small centrally-nucleated regenerating fibers. These dystrophic changes are primarily found in the quadriceps (QA), abdominal (ABDO) and diaphragm (DIA) muscles whereas gastrocnemius, soleus and tibialis anterior are unaffected. By 9 months of age, there are active myopathy of different severity in all the skeletal muscles examined and hypertrophic fibers, fiber splitting and fat replacement are also evident. In scid/blAJ mice, ABDO and DIA muscles are characterized by increased numbers of necrotic and regenerating fibers, infiltration of mononuclear cells into intact fibers, phagocytosis and marked variation of fiber size.

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