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(54) Title: GENETIC MODIFICATIONS FOR XENOTRANSPLANTATION

(57) Abstract: Provided herein are recombinant miniature swine
without expression of endogenous porcine CD47 and SIRPA, but with
the expression of human or humanized CD47 and human or human-
ized SIRPA under the same regulatory elements as the endogenous
porcine CD47 and SIRPA. Also provided are cells, tissues, and or-
gans derived from such recombinant miniature swine. Furthermore,
provided herein are methods of transplanting a graft from a first donor
of such recombinant miniature swine with or without bone marrow
from a second donor of such recombinant miniature swine.

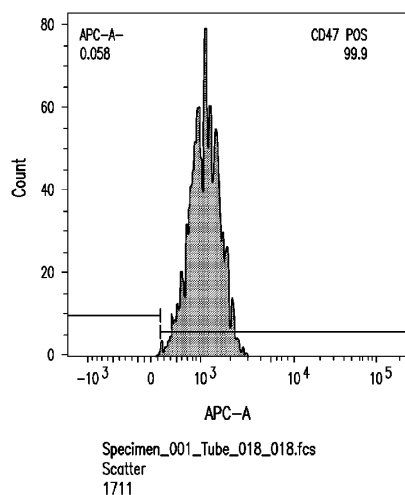


FIG. 1A

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