

SAMR1/TaHsd (Senescence Accelerated Mouse Resistant 1)

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The SAMR1 Mouse is developed by Dr. Toshio Takeda, Dept. of Senescence Biology, Chest Disease Research Institute, Kyoto University, Sakyo-ku, Kyoto 606, Japan, from AKR/J mice and crossed with mice of an unknown strain, followed by sib mating since 1975 with selection for normal life-span.

In 2002 from Takeda Chemical Ltd to Harlan Laboratories. Harlan became Envigo in 2015, then Envigo was acquired by Inotiv in 2021.

CHARACTERISTICS

SAMR1 mice are used as a normally ageing control strain for the SAMP (Senescence- Accelerated Mouse) strains.

Anatomy

In both SAMP1 and SAMR1, the body weight increased rapidly up to 14 weeks of age, and there were no differences between either strain in both males and females (Takeda *et al*, 1981). Age-related changes of the prostate gland in SAMP1 and SAMR1 have been described by Sugimara *et al* (1994).

Genetics

Coat colour gene

- *c*: albino.

Life-span and spontaneous disease

About 25% and 22% of the mice aged over 16 months, which die naturally, have lymphocytic and histiocytic neoplasia, respectively. About 68% of females, which die after 20 months of age, have ovarian cysts. Good passive avoidance skills up to 22 months of age. (Takeda *et al*, 1981; Hosokawa *et al*, 1984; Takeda *et al*, 1991).

SAMR1 mice have a median survival time of 18.9 months. This value corresponds to those of common-long-lived strains, including C57BL and CBA.

Miscellaneous

Characteristics of the SAMR1 strain have been described by Festing (1997) and Lyon *et al*, (1996).

Reproductivity

The time at which reproductive capability was reached in the SAMP3, SAMP11 and SAMR1 was between 39 to 45 days after birth and there was no difference.

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