

POSTER PRESENTATION

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Genotype and phenotype of balb/c mouse strain expressing h-2k^b-tsa58- sv40 immortalizing oncogene

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Introduction

The Simian Virus 40 (SV40) large T antigen is multifunctional protein with DNA helicase, RNA helicase and ATPase activities which contribute to multistep tumorigenesis in rodents and humans. The Immortomouse mouse strain expresses a mutated large T antigen tsA58 oncogene under the control of the interferon inducible murine H-2K^b promoter on chromosome 16. Our aim was to establish a BALB/c strain of H-2K^b-tsA58 immortomice that could be utilized to investigate specific pathological and physiological patterns associated SV-40 oncogenicity and generation of conditionally immortal cells lines.

Methods and results

We have crossed H2K^b-SV40-tsA58 CBA/CaxC57BL/10 hybrid immortomice with BALB/c mice to obtain a transgenic colony with unique BALB/c background. We have used two pre-validated PCR genotype assays that can distinguish between wild-type, hemizygous, and homozygous animals (4-6 months old). Enlargement of thymus is a phenotypic abnormality of immortomouse. We have characterized macroscopically and by immunohistochemistry in the F1-3 offspring hemizygous females with thymic hyperplasia (2:5 ratio). Studies are underway to typing T cell (CD4/8) populations in the thymuses. Moreover, we observed four small males displaying abnormality after birth.

Conclusion

This transgenic mouse strain will help to isolate immortalizing cell lines growing under the permissive 33°C

temperature for the studies of the SV40 large T antigen transformation.

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