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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 ATPse activities which contribute to multistep tumorogenesis 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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