The rasH2 Mouse*

A MODEL TO ACCELERATE CARCINOGENICITY TESTING STUDIES

* Developed by CIEA
The rasH2 Mouse*

When you perform traditional carcinogenicity testing over a two-year horizon, time and costs are not the only things you are adding to your protocol. You are also exposing your research to the risk of spontaneous tumor development in your models – a risk that can skew your findings.

THE TACONIC rasH2 MOUSE* OFFERS A BETTER ALTERNATIVE

Taconic rasH2 mice enable you to perform short-term carcinogenicity testing of compounds on a much faster time line – reducing the in-life portion of your study to ¼ of a traditional two year study.

The use of rasH2 is approved by the FDA and the International Conference on Harmonisation (ICH) S1B Guideline 1. Faster testing means lower costs, quicker answers on your compounds, and a significantly lower risk of spontaneous tumors.

Like all of the models in our unique Taconic Transgenic Models portfolio, rasH2 mice are sold with full research use rights and are readily available in typical study quantities – enabling you to immediately begin using them in your research.

CANCER SYMPTOMS FROM NONE TO TERMINAL

* Developed by CIEA

TO ORDER
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ADVANTAGES OF THE rasH2 MOUSE®

- **Shorter studies.** Using Taconic’s rasH2 mice, you can greatly reduce the in-life portion of your testing – cutting your study time by as much as 75 percent.

- **Lower study costs.** Taconic rasH2 mice reduce your total research costs through lower cage costs, less compound administration, and reduced labor costs.

- **Faster results.** Since Taconic’s rasH2 mice allow you to complete carcinogenicity studies in a fraction of the time, you obtain critical data and answers sooner.

- **More accurate results.** With no spontaneous tumor indication up to the age of 6 months, Taconic rasH2 mice reduce the incidence of false positives.

- **Availability of Historical Data.** A substantial amount of phenotypic background data is available for rasH22,3,4,5. These data demonstrate the low incidences of spontaneous tumors and the robustness of the model in identifying carcinogens, providing a valuable reference for current and future carcinogenicity studies.

**KEY APPLICATIONS**

Taconic rasH2 mice provide a fast, cost-effective option for testing for mutagenic and non-mutagenic chemically-induced tumor formation.

**HOW TACONIC’S rasH2 MOUSE® WORKS**

Taconic rasH2 mice carry the human c-Ha-ras oncogene in addition to the endogenous murine Ha-ras oncogene. The presence of the human c-Ha-ras gene makes hemizygous rasH2 mice highly susceptible to tumor development when exposed to compounds that cause cancer in humans.

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PROPOSED CHANGES IN THE ICH S1 GUIDELINES ON RODENT CARCINOGENICITY TESTING: THE UTILITY OF THE RAS2 MODEL

A change to the current ICH S1 guidelines on rodent carcinogenicity testing is being considered6. The proposal suggests that the traditional two year rat carcinogenicity assay may not be necessary for certain compounds based on the compound’s properties. For such compounds sponsors will have the choice to either conduct a traditional 2-year mouse study or to use a short-term transgenic mouse testing assay, with an apparent time advantage for the latter approach. Furthermore, the ICH S1 guidelines propose a short-term transgenic carcinogenicity assay as one way of quickly determining the need for a further two year rat study.

The ICH S1 has developed a set of Weight of Evidence (WOE). Sponsors are encouraged to develop a Carcinogenicity Assessment Document (CAD) that include this Weight of Evidence to determine the value and need for a 2-year rat carcinogenicity study. Studies using the rasH2 model can be used as part of the WOE in preparing the Carcinogenicity Assessment Document1.

Talk to one of our PhD scientists to learn more about these proposed guideline changes and the future utility of the rasH2 model in light of these proposals.

**REFERENCES**


Taconic forward thinking. To get you further with your study.

ADDITIONAL SERVICES

CUSTOM MODEL GENERATION
Taconic Custom Model Generation Solutions empower our clients to develop research models specifically suited to the unique needs of their discovery and development studies or therapeutic programs.
- Gene Inactivation
- Gene Mutation or Replacement
- Gene Editing - CRISPR Technology
- Transgene Expression
- miRNA expression
- Cohort Production Packages

HUMANIZATION
Taconic offers both genetic and cell and tissue based humanization of mouse models. Humanized mouse models are increasingly being utilized for a variety of research applications.
- Genetically Humanized Mice
- Cell and Tissue Humanized Mice

CUSTOM BREEDING
Taconic’s fully integrated Custom Breeding Solutions bring innovative models from design to study ready cohorts with unprecedented speed and transparency.
- Embryology
- Rapid Colony Expansion
- Surgical Services
- Tissue Collection
- Animal Health Testing and Diagnostics
- Genotyping and Molecular Analysis
- Microbiome and Germ Free Research Models and Services

CHOOSE TACONIC
For more than 60 years, Taconic has anticipated the needs of the scientific community to deliver models and services that meet the diverse needs of biomedical and biopharmaceutical researchers.

Today that forward thinking and commitment to working collaboratively has resulted in a client-centric environment infused with a knowledge bank that allows you to draw on informed insight about next generation GEMs and humanized mouse models, enabling fast and reliable outcomes in your research.

YOUR COLLABORATIVE PARTNER
As a full-service biosciences company Taconic can help you acquire, test, develop, breed, cryopreserve, prepare, and distribute highly relevant research lines worldwide. Whether you require custom genetically engineered, humanized or research-ready models, Taconic’s scientists will partner with you to rapidly and efficiently obtain the highest quality models.

TALK TO A SCIENTIST
Our scientific teams are happy to meet and talk with you about the most efficient way of conducting your research. Working in partnership with clients the world over, our scientific teams offer expert advice that can help you speed up your research and reduce your overall costs.

TALK TO A REPRESENTATIVE
For general information, you can talk to a member of our customer service team. Our customer service team is here to help you make the right decisions and get the models you need fast. Contact us at info@taconic.com

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