Traditional two-year carcinogenicity assays are slow, expensive, and difficult to interpret with clarity due to the high rate of background tumor development over a typical mouse's two-year lifespan. rasH2 is the only widely used transgenic model accepted by global regulatory authorities for six-month carcinogenicity studies, providing a faster, clearer, and less costly way to assess carcinogenic potential of drug candidates.
The rasH2 model enables you to perform short-term carcinogenicity testing of compounds on a much faster timeline – reducing the in-life portion of your study to ¼ of a traditional two-year study.

The use of Taconic rasH2 mice is accepted by the Food & Drug Administration (FDA), European Medicines Agency (EMA), National Medical Products Administration (NMPA), and other regulatory agencies for use in carcinogenicity testing under the International Conference on Harmonisation (ICH) S1B(R1) Guideline. Developed by CIEA and distributed by Taconic, rasH2 the only transgenic model with widespread use by drug developers and acceptance by regulatory authorities.

rasH2 mice are sold with full research use rights and are readily available in typical study quantities for distribution globally – enabling you to immediately begin using them in your research.

CARCINOGENICITY TESTING (IN WEEKS)

<table>
<thead>
<tr>
<th>ADMIN TYPE</th>
<th>Many Tumors</th>
<th>Cause of Cancer</th>
<th>CAN EASILY BE JUDGED</th>
</tr>
</thead>
<tbody>
<tr>
<td>rasH2 Mouse</td>
<td>Carcinogen</td>
<td>-</td>
<td>✔</td>
</tr>
<tr>
<td>Wild Type Mouse</td>
<td>No Tumors</td>
<td>No Cancer</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VEHICLE</th>
<th>Cancer symptoms from none to terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>rasH2 Mouse</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>Wild Type Mouse</td>
<td>Spontaneous</td>
</tr>
<tr>
<td>Non-Transgenic Mouse</td>
<td>Carcinogen</td>
</tr>
<tr>
<td></td>
<td>Dietary</td>
</tr>
<tr>
<td></td>
<td>Environmental</td>
</tr>
</tbody>
</table>
HOW THE TACONIC 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.

Substantial phenotypic data demonstrate that rasH2 mice have an extremely low incidence of spontaneous tumors up to the age of six months and provide more rapid onset and a higher incidence of tumors after being treated with either genotoxic or non-genotoxic carcinogens.

By empowering you to complete carcinogenicity testing on a significantly faster timeline than traditional two-year studies in non-transgenic mice, rasH2 mice greatly reduce your study costs. And with very low incidence of spontaneous background tumor formation, rasH2 mice minimize the risk of false positives and enable you to gain greater clarity on your drug’s carcinogenic potential.

ADVANTAGES OF THE rasH2 MOUSE

**SHORTER STUDIES FOR FASTER ANSWERS**
- Forego the two-year standard mouse study and opt instead to conduct a six-month rasH2 study
- Reduce the in-life portion of your carcinogenicity testing by as much as 75 percent
- Obtain critical data and answers on your compound sooner
- For compounds which receive a waiver on a two-year rat study, use of rasH2 can condense the overall carcinogenicity assessment timeline significantly.

**MORE ACCURATE CARCINOGENICITY RESULTS**
- Reduce false positives and avoid confusing conclusions using a model with low risk of spontaneous tumor formation
- Gain clarity on your small molecule drug’s carcinogenic potential, for both genotoxic and non-genotoxic carcinogens
- Move forward confidently using a model accepted by the FDA, EMA, NMPA, and other global regulators

**LOWER CARCINOGENICITY TESTING COSTS**
- Use smaller study group sizes than standard mouse assays require
- Reduce your cage utilization and compound dosing costs
- Fewer animals dosed for a shorter time period means lower total test article required and thus decreased costs for test article production
- Significantly reduce the number of pathology samples and analysis
Assess your small molecule drug for **carcinogenicity faster and at a lower cost.**

Choose the only transgenic model that’s both widely used by drug developers and accepted by global regulatory agencies for short-term carcinogenicity testing—now with the potential to condense overall carcinogenicity assessment timelines significantly for compounds which receive a two-year rat study waiver.

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**CONDITIONS OF USE FOR TACONIC TRANSGENIC MODELS™**

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Get in touch for more information or to schedule a consultation on the rasH2 mouse model.

US: 1-888-822-6642 | EU: +45 70 23 04 05 | info@taconic.com | Learn more at: taconic.com

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