Also Known As: Ai9 or Ai9(RCL-tdT)

Ai9 is a Cre reporter tool strain designed to have a loxP-flanked STOP cassette preventing transcription of a CAG promoter-driven red fluorescent protein variant (tdTomato) - all inserted into the Gt(ROSA)26Sor locus. Ai9 mice express robust tdTomato fluorescence following Cre-mediated recombination. This strain is congenic on the C57BL/6J genetic background.

The Ai9 allele is very similar in design to the Ai14 allele (Stock No. 007914) - differing only in the presence (Ai9) or absence (Ai14) of an att site-flanked neo selection cassette at the 3' end of the targeted allele.

Importantly, both Ai9 and Ai14 may exhibit low levels of tdTomato expression prior to exposure to Cre recombinase - but the tdTomato expression levels after Cre recombination are significantly greater than those baseline levels. As such, it is recommended that researchers include Cre-negative controls to establish the baseline tdTomato levels in their experiments.

Donating Investigator

Hongkui Zeng, Allen Institute for Brain Science
**GT(ROSA)26Sor^tm9(CAG-tdTomato)Hze**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
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<tbody>
<tr>
<td>Targeted (Conditional ready (e.g. floxed), Reporter)</td>
<td>GT(ROSA)26Sor</td>
<td>gene trap ROSA 26, Philippe Soriano</td>
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</table>

**RESEARCH APPLICATIONS**

Neurobiology Research
Research Tools

**BASE PRICE**

Starting at:

$236.78 Domestic price for female 5-week

**Details**

**Detailed Description**

Ai9 mice homozygous for this Rosa-CAG-LSL-tdTomato-WPRE conditional allele are viable and fertile. A \( \text{loxP} \)-flanked STOP cassette is designed to prevent transcription of the red fluorescent protein variant tdTomato (see below). When bred to mice that express Cre recombinase, the resulting offspring will have the STOP cassette deleted in the \( \text{cre} \)-expressing tissue(s) - resulting in robust tdTomato fluorescence. Because this CAG promoter-driven reporter construct is inserted into the GT(ROSA)26Sor locus, robust tdTomato expression is determined by which tissue(s) express Cre recombinase. These Ai9 mice are useful as a Cre reporter strain - expressing tdTomato fluorescence following Cre-mediated recombination.

Importantly, the donating investigator reports that very low levels of tdTomato expression may be present prior to introduction of Cre recombinase - but the tdTomato expression levels after Cre recombination are significantly greater than those baseline levels. As such, it is recommended that researchers include Cre-negative Ai9 controls to establish the baseline tdTomato levels in their experiments.
Of note, the FRT sites flanking the mutation allow for additional targeted replacement of the reporter sequences through Flp-mediated recombination if so desired. Similarly, the attB/attP-flanked selection cassette may be removed by introduction of the site-specific bacteriophage PhiC31 integrase if so desired.

For characterization information, see images at the Allen Institute for Brain Science website (Ai9 images).

The Allen Institute for Brain Science website has specific characterization information for several Cre Driver and Cre Reporter lines. Please see their website for images of Allen Institute for Brain Science experiments performed with all lines.

The Ai9 allele is very similar in design to the Ai14 allele (Stock No. 007914) - differing only in the presence (Ai9) or absence (Ai14) of an att site-flanked selection cassette at the 3' end of the targeted allele. Specifically, the Ai9 allele (Gt(ROSA)26Sor^{tm9(CAG-tdTomato)Hze}) is designed as Rosa26::CAG::FRT::loxP-STOP::loxP::tdTomato::WPRE::polyA::attB::PGK-FRT-neo-polyA-attP, whereas the Ai14 allele (Gt(ROSA)26Sor^{tm14(CAG-tdTomato)Hze}) is designed as Rosa26::CAG::FRT::loxP-STOP::loxP::tdTomato::WPRE::polyA::attL.
Genotyping Protocols

Standard PCR: Gt(ROSA)26Sor(tdTomato-WPRE)

Genotyping resources and troubleshooting

Breeding Considerations

Mutant mice were bred to C57BL/6J inbred mice for many generations to establish this congenic strain. When maintaining the live congenic colony, homozygous mice may be bred together.

Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote

Citation
When using the Ai9 or Ai9(RCL-tdT) mouse strain in a publication, please cite the originating article(s) and include JAX stock #007909 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

 AX12 (Maximum)

Pricing & Availability

Live mice available in varying quantities. Ask Customer Service for details.

Available Now

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>5 weeks</td>
<td>Female</td>
<td>Homozygous for Gt(ROSA)26Sor tm9(CAG-tdTomato)Hze</td>
<td>$236.78</td>
</tr>
<tr>
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<td>Male</td>
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<tr>
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Related Products and Services

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<thead>
<tr>
<th>Product</th>
<th>Code</th>
<th>Price</th>
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<tr>
<td>Frozen Mouse Embryo</td>
<td>B6.Cg-Gt(ROSA)26Sor&lt;tm9(CAG-tdTomato)Hze/J</td>
<td>$2595.00</td>
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