**Overview**

**Also Known As:** -subunit-

These Gsa knock-out mice exhibit severe hypothyroidism resulting in dwarfism. They are suitable for use in applications related to the study of the role of pituitary thyrotropin (TSH) and gonadotropins (LH and FSH) in thyroid and gonadal development.

**Donating Investigator**

Dr. Sally A. Camper, University of Michigan Medical School
**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>Cga&lt;sup&gt;tm1Sac&lt;/sup&gt;</td>
<td></td>
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<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tr>
<td>Targeted (Null/Knockout)</td>
<td>Cga</td>
<td>glycoprotein hormones, alpha subunit</td>
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**RESEARCH APPLICATIONS**

Developmental Biology Research
Endocrine Deficiency Research
Internal/Organ Research
Reproductive Biology Research

**BASE PRICE**
Starting at:

$2,595.00 Domestic price Cryo Recovery

**Details**

**Detailed Description**
Mice homozygous for the Cga<sup>tm1Sac</sup> targeted mutation are viable but both sexes are infertile. They lack TSH, LH, and FSH. Homozygous mutant mice are hypogonadal and exhibit severe hypothyroidism resulting in dwarfism. Development of the thyroid gland was arrested in late gestation. However, gonadotropin releasing hormone (GNRH) neuron migration, development of secondary sex organs, and fetal and neonatal gonadal development are normal. Mice heterozygous for the Cga<sup>tm1Sac</sup> targeted mutation appear normal.

**Control Suggestions**

**Selected References**

**Genetics**
Genotyping Protocols
Standard PCR: COf^m15ac
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, heterozygous mice may be bred together or to wildtype mice from the colony. Homozygous mice are viable but both sexes are infertile. The expected coat color from breeding is black.
Additional Breeding and Husbandry Support

Appearance
black
Related Genotype: a/a

Citation
When using the strain in a publication, please cite the originating article(s) and include JAX stock #002494 in your Materials and Methods section.
Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

Pricing & Availability
Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

Domestic
International
Pricing effective for USA, Canada and Mexico shipping destinations
Cryorecovery - Domestic Pricing
<table>
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<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or Wild-type for Cga&lt;tm1Sac&gt;</td>
<td>$2,595.00</td>
</tr>
</tbody>
</table>

We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. Please check genotypes which will be recovered. While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. Animals are typically ready to ship in 11-14 weeks. If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary.

Cryorecovery to establish a Dedicated Supply for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.

<table>
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<tr>
<th>Related Products and Services</th>
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<tr>
<td>Frozen Mouse Embryo</td>
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Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

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The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. Therefore, we cannot guarantee a strain’s phenotype will meet all expectations. To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project.

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Phone: 207-288-6470
Email: TechTran@jax.org

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Shipments have begun at our new facility, allowing increased access to JAX mouse models.