 STOCK Hhat Tg(TFAP2A-cre)1Will/J  

Stock No: 023407 | AP-2CRE  

Transgenic  

CRYO RECOVERY  

PLACE ORDER  

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

Also Known As: AP-2CRE, Creface<sup>T</sup>  

These Creface transgenic mice have a cre-recombinase sequence driven by the human transcription factor AP-2, alpha promoter/enhancer elements, and a polyadenylation sequence followed by parts of exons 5-6 of Tfap2a, encoding the frontonasal prominence (FNP) and limb enhancer elements. This transgene integrated into intron 9 of the hedgehog acyltransferase (Hhat) gene, abolishing Hhat gene function. These mice may be useful for studying craniofacial development.

Donating Investigator  

Trevor Williams, University of Colorado, Denver

Genetic Background | Generation

Hhat<sup>Tg(TFAP2A-cre)1Will</sup>  

Allele Type  

Transgenic (Recombinase-expressing, Null/Knockout)

VIEW GENETICS

Developmental Biology Research  
Neurobiology Research  
Research Tools

VIEW ALL RESEARCH APPLICATIONS
These Creface transgenic mice express Cre recombinase under the control of the human transcription factor AP-2, alpha (Tfap2a) promoter/enhancer elements. A polyadenylation sequence followed by parts of exons 5-6 of Tfap2a, encoding the frontonasal prominence (FNP) and limb enhancer elements, was inserted downstream of the cre sequence. AP-2alpha is a transcription factor expressed in the neural tube, and in cranial and cardiac neural crest cells in the developing embryo, as well as in the progress zone of the limb bud, the developing kidney, the eye, and surface ectoderm. The transgene was found to have integrated into intron 9 of the hedgehog acytransferase (Hhat) gene, abolishing Hhat gene function. HHAT deficiency has been associated with holoprosencephaly, failure of the forebrain to bifurcate, together with acrania and agnathia. Hemizygous mice are viable and fertile, while homozygotes are embryonic lethal. These mutants lack Hhat activity resulting in craniofacial development defects evident between E14.5 and E17.5. Homozygous embryos exhibit abnormal morphology of the frontonasal, mandibular, and maxillary processes. They also exhibit defects in the development of the cranium, eye, nasal cavity and septum, mouth, and palates. Neural crest morphology is also altered, as is midbrain and forebrain morphology. Expression of cre recombinase was detected in the embryonic face and limb mesenchyme. When crossed with a strain containing a loxP site-flanked sequence, Cre-mediated recombination results in deletion of the flanked sequence in cre-expressing cells.

For example, when bred to STOCK Tfap2atm2Will/J mice (Stock No. 023406) expressing a floxed-Tfap2a gene, frontonasal knockout (FKO) mice exhibit midfacial growth anomalies including shortened snouts and wide-set eyes by postnatal day 15.
Genotyping Protocols
Standard PCR: Hhat<sup>Tg(TFAP2A-cre)1Will</sup>
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, heterozygous mice may be bred to wildtype (non-carrier) mice from the colony. Homozygous mice are embryonic lethal.
Additional Breeding and Husbandry Support

Citation
When using the AR-26PE mouse strain in a publication, please cite the originating article(s) and include JAX stock #023407 in your

Animal Health Reports
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.

Cryo Recovery - Domestic Pricing

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or wildtype for Hhat&lt;sup&gt;Tg(TFAP2A-cre)1Will&lt;/sup&gt;</td>
<td>$2,854.50</td>
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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.
Cryoerecovery 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>
<thead>
<tr>
<th>Related Products and Services</th>
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<tbody>
<tr>
<td>Frozen Mouse Embryo</td>
<td>$2,595.00 per straw or vial</td>
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Payment Terms and Conditions
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- By Allele
- By Gene
- By Collection

All Related Strains