

B6.Cg-Gt(ROSA)26Sor^{tm1(CAG-Pycard/mCitrine*, -CD2*)Dtg} /J

Stock No: **030743** | R26-CAG-LSL-ASC-citrine

 Congenic, Gene Trap

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citrine fusion protein, all inserted into the *Gt(ROSA)26Sor* locus. Following removal of the floxed-STOP cassette, they express a fluorescent adaptor fusion protein (ASC-citrine) that retains the function of endogenous ASC - forming assembled inflammasome complexes (specks) upon exposure to inflammasome activator(s) both *in vitro* and *in vivo*. These R26-CAG-LSL-ASC-citrine mice are a Cre recombinase-dependent fluorescent reporter of inflammasome complex activation.

Of note, the constitutively-expressed R26-CAG-ASC-citrine mice are also available as Stock No. [030744](#).

Donating Investigator

Douglas T Golenbock, University of Massachusetts Medical School

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GENETIC OVERVIEW

Genetic Background

Generation

Gt(ROSA)26Sor^{tm1(CAG-Pycard/mCitrine, -CD2*)Dtg}*

Allele Type

Targeted (Conditional ready
(e.g. floxed), Reporter)

Gene Symbol

Gt(ROSA)26Sor

Gene Name

gene trap ROSA 26, Philippe Soriano

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools

Immunology, Inflammation and Autoimmunity Research

Cell Biology Research

Cancer Research

Neurobiology Research

BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

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Details

Detailed Description

In general, inflammasomes are multiprotein complexes consisting of three proteins: (i) a receptor that recognizes danger signals, (ii) the adaptor protein ASC (*Pycard*) and (iii) the enzyme caspase-1. The inflammasome functions as a key signaling platform that detects pathogenic microorganisms and sterile stressors, and then controls the caspase-1-dependent maturation of the highly pro-inflammatory cytokines interleukin-1 β (IL-1 β) and IL-18.

The R26-CAG-LSL-ASC-citrine floxed allele has a CAG promoter and *loxP*-flanked STOP cassette upstream of the mASC-*citrine* fusion protein, all inserted into the *Gt(ROSA)26Sor* locus.

In the absence of Cre recombinase, the R26-CAG-LSL-ASC-citrine allele has a floxed-STOP cassette preventing expression of the downstream genes.

Cre-mediated deletion of the floxed-STOP cassette results in the R26-CAG-ASC-citrine allele that expresses the fluorescent adaptor fusion protein mASC-*citrine* - an apoptosis-associated speck-like protein containing a caspase recruitment domain (ASC; *Pycard*) fused to the Citrine yellow fluorescent protein variant with a C-terminal hemagglutinin tag. Co-expression of a truncated signaling-deficient version of human CD2 is also observed (as the mASC-*citrine*-HA sequence is followed by a *frt*-flanked IRES-hCD2*).

When expressed, ASC-citrine retains the function of endogenous ASC - forming assembled inflammasome complexes (specks) upon exposure to inflammasome activator(s) both *in vitro* and *in vivo*. Specifically, speck formation in mouse tissues is detectable (both intracellularly and extracellularly) following Influenza Virus A/PR8 infection. Additionally, both hematopoietic cells and non-hematopoietic cells are capable of expressing specks and stimulating the downstream signal pathway when activated.

Before inflammasome activation, ASC-citrine fluorescence is dim. Following inflammasome activation, ASC-citrine fluorescence is very bright upon excitation with blue light (~488nm) and is suitable for flow cytometry.

Mice heterozygous or homozygous for the R26-CAG-LSL-ASC-citrine allele are viable and fertile with no reported gross physical or behavioral abnormalities.

In addition to these R26-CAG-LSL-ASC-citrine floxed mice (Stock No. 030743), the constitutively-expressed R26-CAG-ASC-citrine mice are also available as Stock No. [030744](#).

Development

Expression Data

[+ Control Suggestions](#)

[+ Selected References](#)

[- Genetics](#)

[+ *Gt\(ROSA\)26Sor^{tm1\(CAG-Pycard/mCitrine*,-CD2*\)Dtg}*](#)

[- Disease/Phenotype](#)

[+ Disease Terms](#)

[+ Research Areas By Phenotype](#)

[+ Mammalian Phenotype Terms by Genotype](#)

[+ References](#)

[- Technical Support](#)

C O N T A C T T E C H N I C A L S U P P O R T

Genotyping Protocols

Standard PCR:[Generic Neo](#)

Probe:[Generic Neo](#)

Separated PCR:[Gt\(ROSA\)26Sor Alternate4](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

Mice heterozygous or homozygous for the R26-CAG-LSL-ASC-citrine allele are viable and fertile with no reported gross physical or behavioral abnormalities. When maintaining a live colony, heterozygous mice may be bred together, to wildtype mice from the colony or to C57BL/6J inbred mice (Stock No. [000664](#)). Alternatively, homozygous mice may be bred together.

[Additional Breeding and Husbandry Support](#)

Mating System

Homozygote x Homozygote

Citation

When using the R26-CAG-LSL-ASC-citrine mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #030743 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, [G200](#)

➔ Pricing & Availability



Cryo
Recovery

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Cryo Recovery	Heterozygous for Gt(ROSA)26Sor<tm1(CAG-Pycard/mCitrine*, -CD2*)Dtg>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	B6.Cg-Gt(ROSA)26Sor<tm1(CAG-Pycard/mCitrine*-CD2*)Dtg>/J	\$2595.00
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