**Docket #:** S23-334

# Cckar-Cre knock-in mice - Jackson Labs 037017

CckarCre CRISPR-derived knock-in mice are designed to have 2A-cre sequence inserted into the 3' UTR of the cholecystokinin A receptor (Cckar) gene. Cckar encodes a G-protein coupled receptor that binds non-sulfated members of the cholecystokinin (CCK) family of peptide hormones. This receptor is involved in mating behavior in both sexes, maternal aggression, and male territorial aggression. It is also a major physiologic mediator of pancreatic enzyme secretion and smooth muscle contraction of the gallbladder and stomach. In the central and peripheral nervous system this receptor regulates satiety and the release of beta-endorphin and dopamine. The presence of 2A-cre cassette in the 3' UTR allows for expression of CCKAR and Cre. Homozygous mice are viable and fertile. When these mice are bred with mice containing loxP-flanked sequence, Cre-mediated recombination will result in deletion of the loxP-flanked sequences in Cckar-expressing cells.

## Applications

- These mice can be used for developing or testing modulators of circuits or cells in health and disease for feeding and metabolism (example relevant conditions are obesity, gallstones, diabetes mellitus, disorders of gastrointestinal motility), sexual behavior and libido (hyposexual desire disorder, menopause, other causes of abnormal libido), heart rhythms (heart arrhythmia), and cognitive symptoms in various diseases (such as hallucinations in schizophrenia or alcohol withdrawal).

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