

# Signal Reporter Assay Kit

## IRF1 Reporter Assay Kit

Cat. no. 336841 CCS-7040L

### For study of pathway activity

The Signal IRF1 Reporter Assay Kit measures the transcriptional activity of Interferon Regulatory Factor 1 (IRF1), a member of the interferon regulatory transcription factor (IRF) family. IRF1 serves as a transcriptional activator of interferon alpha and beta as well as genes induced by interferon alpha, beta and gamma. IRF1 regulates host defense against pathogens, tumor prevention, and development of the immune system. The IRF1 reporter is a mixture of an IRF1-responsive luciferase construct and a constitutively expressing Renilla element (40:1). The IRF1-responsive luciferase construct encodes the firefly luciferase reporter gene under the control of a minimal (m)CMV promoter and tandem repeats of the IRF1 transcriptional response element. The number of response elements as well as the intervening sequence between response elements have been experimentally optimized to maximize the signal to noise ratio. This reporter monitors both increases and decreases in the transcriptional activity of IRF1. The constitutively expressing Renilla element encodes the Renilla luciferase reporter gene under the control of a CMV immediately early enhancer/promoter and acts as an internal control for normalizing transfection efficiencies and monitoring cell viability. Using a simple dual-luciferase assay, scientists can easily monitor the activity of IRF1 signaling pathways and determine the effect of various treatments, such as gene knockdown, over-expression, and chemical compounds on those pathways.

For further details, consult the *Signal Reporter Assay Handbook*.

### Shipping and storage

The Signal Reporter Assay Kit is shipped on dry ice or blue ice. Store at  $-20^{\circ}\text{C}$ . When stored under these conditions, this product can be used for 6 months from the date of receipt without reduction in performance.

**Note:** Open the package and store the products appropriately immediately on receipt.

### Performance data

Visit the Website to view performance data for this product.



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## Contents

| Product                   | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Cat. no. |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Signal Reporter Assay Kit | For 500 reporter assays, 500 negative control assays, and 250 positive control assays when using the recommended 96-well plate transfection protocol; 500 $\mu$ l (100 ng/ $\mu$ l) Reporter (40:1 mixture of inducible firefly luciferase construct and constitutively expressing Renilla luciferase construct); 500 $\mu$ l (100 ng/ $\mu$ l) Negative control (40:1 mixture of non-inducible firefly luciferase construct and constitutively expressing Renilla luciferase construct); 250 $\mu$ l (100 ng/ $\mu$ l) Positive control (40:1:1 mixture of constitutively expressing GFP, constitutively expressing firefly luciferase, and constitutively expressing Renilla luciferase constructs) | Varies   |

Signal Reporter Assay Kit products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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