

# Signal Reporter Assay Kit

## AP1 Reporter Assay Kit

Cat. no. 336841 CCS-011L

### For study of pathway activity

The Signal AP1 Reporter Assay Kit is designed to monitor the activity of AP1-regulated signal transduction pathways in cultured cells. The activator protein-1 (AP1) transcription factor is a hetero- or homo-dimeric complex that comprises members of the proto-oncogene Jun protein family (c-Jun, JunB and JunD) and Fos protein family (c-Fos, Fos B, Fra-1 and Fra-2). The stress-activated protein kinase/Jun N-terminal kinase (SAPK/JNK) signal transduction pathway is responsible for the phosphorylation and activation of Jun, which in turn activates AP1. The AP1 reporter is designed for measuring the modulation of the JNK/AP1 pathway. The AP1 reporter is a mixture of an inducible AP1-responsive luciferase construct and a constitutively expressing Renilla construct (40:1). The AP1-responsive luciferase construct encodes the firefly luciferase reporter gene under the control of a minimal (m)CMV promoter and tandem repeats of the TPA-response element. We have experimentally optimized the number of response elements as well as the intervening sequence between response elements to maximize the signal to noise ratio. The constitutively expressing Renilla construct 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, you can easily monitor the activity of AP1-mediated 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°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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