

# Signal Reporter Assay Kit

## RXR Reporter Assay Kit

Cat. no. 336841 CCS-9044L

### For study of pathway activity

The Signal RXR Reporter Assay Kit measures the activity of Retinoid X Receptor (RXR)-mediated signal transduction pathway. RXR is a member of the nuclear hormone receptor family. RXR plays an important role in many fundamental biological processes such as reproduction, cellular differentiation, bone development, hematopoiesis and pattern formation during embryogenesis. RXR is also implicated in some pathological conditions as neoplastic formation and is a potential target for cancer therapy. Besides acting as a homodimer, RXR plays a central role in regulating the activity of other nuclear hormone receptors by acting as a heterodimeric partner. RXR forms functional heterodimers with retinoic acid receptor (RAR), thyroid hormone receptor, vitamin D receptor, NGFI-B and many other nuclear receptors. The RXR reporter is a mixture of an RXR-responsive luciferase construct and a constitutively expressing Renilla element (40:1). The RXR-responsive luciferase construct encodes the firefly luciferase reporter gene under the control of a minimal (m)CMV promoter and tandem repeats of the RXR 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 RXR. 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 easily monitor the activity of RXR and determine the effect of various treatments, such as gene knockdown, over-expression, and chemical compounds on RXR.

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

### Shipping and storage

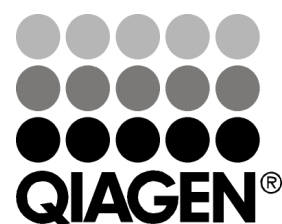
The Signal Reporter Assay Kit is shipped on dry ice or blue ice. Store at  $-20^{\circ}\text{C}$ . When stored under these conditions, this product can be used for 6 months from the date of receipt without reduction in performance.

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

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## Performance data

Visit the Website to view performance data for this product.



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Sample & Assay Technologies

## 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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