

# Signal Reporter Assay Kit

## XRE Reporter Assay Kit (GFP)

Cat. no. 336841 CCS-7045G

### For study of pathway activity

The Signal Xenobiotic Response (XRE) Reporter Assay Kit is designed to monitor the activity of AhR signaling in cultured cells. The Aryl hydrocarbon receptor (AhR) is a cytosolic transcription factor that is normally inactive. Upon ligand binding, AhR translocates into the nucleus and dimerizes with ARNT, leading to changes in gene expression. The AhR/ARNT complex recognizes the xenobiotic responsive element (XRE) in promoters. Activation of AhR signaling leads to the induction of xenobiotic metabolizing enzymes such as CYP1A1, CYP1A2, CYP1B1, NQO1, ALHD3A1, UGT1A2 and GSTA1 and thereby acts as a indication of toxic response . The kit contains transfection-ready XRE reporter as well as positive and negative controls. The XRE reporter encodes the Monster GFP gene under the control of a minimal (m)CMV promoter and tandem repeats of the XRE transcriptional response element (TRE). 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.

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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