

Signal Reporter Assay Kit

ARE Reporter Assay Kit

Cat. no. 336841 CCS-5020L

For study of pathway activity

The Signal ARE Reporter Assay Kit is designed to measure the transcriptional activity of Nrf2 (NF-E2-related factor 2) and Nrf1 transcription factors. The Nrf2 and Nrf1 bind to antioxidant response elements (AREs) and regulate expression of genes involved in protecting cells from oxidative damage and can prevent mutagenesis and cancer. The ARE reporter is a mixture of a Nrf2-responsive luciferase construct and a constitutively expressing Renilla element (40:1). The Nrf2-responsive luciferase construct encodes the firefly luciferase reporter gene under the control of a minimal (m)CMV promoter and tandem repeats of the ARE transcriptional response element. The number of response elements and the intervening sequence between these response elements has been experimentally optimized to maximize the signal to noise ratio. This construct monitors both increases and decreases in the transcriptional activity of Nrf2, and hence the activity of the antioxidant response pathway. 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 antioxidant response signaling pathway 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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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 μ l (100 ng/ μ l) Reporter (40:1 mixture of inducible firefly luciferase construct and constitutively expressing Renilla luciferase construct); 500 μ l (100 ng/ μ l) Negative control (40:1 mixture of non-inducible firefly luciferase construct and constitutively expressing Renilla luciferase construct); 250 μ l (100 ng/ μ 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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