

Signal Reporter Assay Kit

ERSE Reporter Assay Kit

Cat. no. 336841 CCS-2032L

For study of pathway activity

The Cignal ERSE Reporter Assay Kit is designed to measure activity of endoplasmic reticulum (ER) stress signaling. The ERSE serves as a critical cis-acting motif, which mediates the transcriptional response to ER stress. The consensus ERSE is a tripartite nucleotide sequence (CCAAT(N9)CCACG), which contains binding sites for the transcription factors NF-Y/CBF and YY1. The ER stress response element binding factor (ERSF) complex also interacts with the ERSE nonanucleotide sequence and contains ATF6 and TFII-I proteins. ER stress plays a critical role in multiple diseases, and pharmacologically active drugs can induce cell death through ER stress pathways. The ERSE reporter is a mixture of a ERSE-responsive luciferase construct and a constitutively expressing Renilla luciferase construct (40:1). The ERSE-responsive luciferase construct encodes the firefly luciferase reporter gene under the control of a minimal (m)CMV promoter and tandem repeats of the ERSE 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. The ERSE reporter construct monitors both increases and decreases in the activity of ER stress pathway. The constitutively expressing Renilla luciferase 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 ER stress response and determine the effect of various treatments, such as gene knockdown, over-expression, and chemical compounds.

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

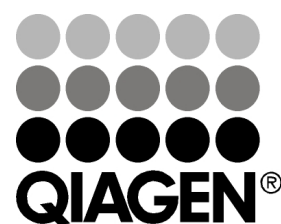
Shipping and storage

The Cignal 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 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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