

Signal Reporter Assay Kit

HNF4 Reporter Assay Kit

Cat. no. 336841 CCS-3039L

For study of pathway activity

The Signal HNF4 Reporter Assay Kit measures the transcriptional activity of Hepatocyte Nuclear Factor 4 (HNF4). HNF4 is a member of the nuclear receptor superfamily of transcription factors that is required for hepatocyte differentiation and development of the liver. HNF4a is expressed in the gastrointestinal system, liver and kidney, with lesser amounts in white adipose tissue and pancreas. Targeted disruption of HNF4a results in defects in embryonic development, homeostasis and metabolism. HNF4a dysfunction has been implicated in Mature Onset Diabetes of the Young type I, type II diabetes mellitus, high serum lipid levels, chronic kidney failure and metabolic syndrome. The best characterized HNF4a target genes are those involved in lipid transport (e.g., apolipoprotein genes) and glucose metabolism (e.g., L-PK and PEPCK). The HNF4 reporter is a mixture of an HNF4-responsive luciferase construct and a constitutively expressing Renilla element (40:1). The HNF4-responsive luciferase construct encodes the firefly luciferase reporter gene under the control of a minimal (m)CMV promoter and tandem repeats of the HNF4 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 HNF4. 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 can easily monitor the activity of HNF4 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*.

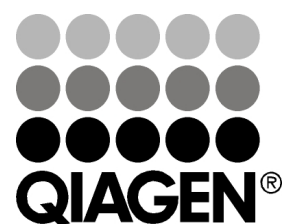
Shipping and storage

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 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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