CREATIVE BIOMART®
Assay Kit

GAL4 Reporter Kit (Glucocorticoid Receptor Pathway)

Product Information

Cat.No. Kit-1735

Product Overview

The glucocorticoid signaling pathway plays an important role in development, fluid homeostasis, cognition, immune response and metabolism. Glucocorticoids are a class of steroid hormones that bind to the glucocorticoid receptor, causing it to translocate to the nucleus. Upon translocation, the receptor can regulate the transcription of a large number of genes, including those that regulate glucose metabolism and inflammatory responses.

Size

500 reactions

Description

The Glucocorticoid Receptor Pathway Reporter Kit is designed for monitoring the activity of the glucocorticoid signaling pathway in cultured cells. The kit contains a transfection-ready expression vector for the glucocorticoid receptor ligand binding domain that is fused to the DNA binding domain (DBD) of GAL4 (GAL4 DBD-GR). This fusion construct activates firefly luciferase expression under the control of a multimerized GAL4 upstream activation sequence (UAS). This allows for specific detection of glucocorticoid-induced activation of the glucocorticoid receptor without the need for individual transcriptional targets and with low crossreactivity for other nuclear receptor pathways. The GAL4/UAS reporter is premixed with constitutively expressing Renilla (sea pansy) luciferase vector, which serves as an internal positive control for transfection efficiency. The kit also includes a non-inducible firefly luciferase vector premixed with constitutivelyexpressing Renilla luciferase vector as a negative control. The non-inducible luciferase vector contains a firefly luciferase gene under the control of a minimal promoter, but without any additional response elements. The negative control is critical for determining pathway-specific effects and background luciferase activity.

Applications

• Monitor glucocorticoid signaling pathway activity. • Screen activators or inhibitors of the glucocorticoid signaling pathway.

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.org
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

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Storage

>1 year from date of receipt when stored at -20°C

Kit Components

Reporter (Component A): GAL4/UAS luciferase reporter vector + constitutively expressing Renilla luciferase vector; 500 µl (60 ng DNA/µl); -20°C Negative Control Reporter (Component B): Non-inducible luciferase vector + constitutively expressing Renilla luciferase vector; 500 µl (60 ng DNA/µl); -20°C GAL4 DBD-GR (Component C): Expression vector for ligand binding domain of the glucocorticoid receptor + GAL4 DNA binding domain; 250 µl (100 ng DNA/µl); -20°C Negative Control Expression vector (Component D): Expression vector with GAL4 DNA binding domain only; 250 µl (100 ng DNA/µl); -20°C

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