LEADING LIGHT® Wnt Reporter Cell Line

Wnt reporter cell line for discovering Wnt pathway modulators

The LEADING LIGHT® Wnt Reporter Cell Line is the basis for a cell-based luciferase activity test suitable for a multi-well plate format, such as 96- or 384-well microplates. The system contains an engineered 3T3 mouse fibroblast cell line, which expresses the firefly luciferase reporter gene under the control of Wnt-responsive promoters (TCF/LEF). The luciferase activity from the reporter gene in this cell line can be up-regulated in a dose-dependent manner upon the addition of exogenous Wnt protein/Wnt agonist or down-regulated by a further addition of a Wnt antagonist to the cell culture medium. This system can be used to elucidate the functions/activities of different Wnt-related ligands such as Wnt, DKK, etc. This system can also be used for screening small molecules and antibodies for their ability to act as Wnt inhibitors or Wnt agonists.

The assay has been used successfully in different assay formats (including HTS applications) to identify several distinct categories of small molecule compounds that modulate the Wnt signaling pathway.

Note: the complete LEADING LIGHT® Wnt Reporter Assay Starter Kit (Prod. No. ENZ-61001) is available.

Wnt ligands bind to Frizzled (Fz) and LRP5/6 receptors to trigger a signaling cascade that leads to stabilization of beta-catenin, which can enter into the nucleus to form a complex with T cell transcription factor (TCF/LEF) to activate Wnt target gene expression1. Canonical Wnt signaling is required for embryo-genesis and adult tissue maintenance and is involved in tumorigenesis and development of many human degenerative diseases. Studies relating to Wnt signaling have advanced research in molecular embryology, stem cell biology, tumorigenesis, regenerative medicine, and rational drug discovery.

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ENZ-61002-0001	1ml

- No-transfection required
- Can be used as a supplement to the Wnt LEADING LIGHT® Wnt Reporter Assay Starter Kit (Prod. No. ENZ-61001)
- When used in the Wnt LEADING LIGHT® Wnt Reporter Assay Starter Kit, there are many advantages of using this line of products:
    - True end-point detection system
    - High sensitivity (Wnt3a EC_{50} = 45.9 ng/ml)
    - Excellent reproducibility (Z'-factor of 0.74)
    - High signal-to-noise ratio without the need for Lithium Chloride to boost the signal
    - High-throughput screening applications (including 384-well microplates)

Manuals, SDS & CofA

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Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Upon receipt, remove the vial of reporter cell line from the box and store in liquid nitrogen. When stored properly, these cells are stable for one year from date received.
Short Term Storage	-80°C
Long Term Storage	Liquid nitrogen
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Quantity	1ml, 2 x 10^6 cells

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