Wnt TCF Reporter Cell Line

Catalog Number	WR3T3L-L
Source	Mouse fibroblast cell line
Synonyms	Wnt reporter, TCF reporter, LEF reporter cell line
Background	The WNT gene family consists of structurally related genes that encode secreted signaling proteins, membrane bound receptors, and signaling transduction proteins. These proteins have been implicated in oncogenesis, adipogenesis, etc. and in several other developmental processes, including regulation of cell fate and patterning during embryogenesis. Activity of the Wnt signaling pathway leads to nuclear translocation of β-catenin and the formation of TCF transcription factor complex. The TCF complex interacts with Wnt gene transcriptional response elements and leads to the expression of Wnt-responsive genes.
Product Description	This Wnt reporter cell line is designed to monitor the activity of β-catenin-based Wnt signal transduction pathway. This mouse fibroblast cell line hosts CMV promoter, tandem repeats of the TCF transcriptional response element, and luciferase gene. This cell line with a catalog above was designed to have limited passages (6 passages).
Activity	The luciferase activity from the Wnt reporter cell line increases 17 fold or 15.8 fold after 8 hours treatment with 5 ng/mL of recombinant mouse Wnt3a on 10 days culture or 13 days culture, respectively.
Handling and Storage	This handling and storage section is specific for this preparation only. The cell line is shipped at RT in 25 cm^2-flask (tissue culture-treated). After receiving, suction out culture medium, attached cells with 1 mL of 0.25% Trypsin solution, neutralize trypsin with 9 mL of complete DMEM, and then seed cells into 100 mm dish or 75 cm^2-flask (tissue culture-treated). The cells should be incubated in 5% CO_2, 37°C Incubator Split cells when 50% to 70% confluence are reached. Alternatively, replace medium and simply replace the cap with a new vent cap. The cells can be frozen and stored at -80°C or in liquid nitrogen after culturing.
Luc Assay	Using normal tissue culture plate: Seed 0.5 mL of cells into each well of 24 wells plate (tissue culture-treated) at a density of 6 to 8 x 10^4 cells/mL in complete DMEM medium, incubate cell at 5% CO_2, 37°C incubator overnight, replace complete DMEM with 198 µL DMEM without serum, add 2 µL of control buffer or Wnt3a (concentration range: 0.06 to 1 µg/mL), return plate into 5% CO_2, 37°C incubator and incubate for 6 to 8 hours, suction out medium, lyse cells with 0.1 mL of cell lysis buffer, incubate for 5 min on rocking shaker at room temperature, transfer 50 µL of cell lysate from each wells into the wells of a white plate, add 50 µL of Luciferase substrate into each well, read Luciferase activity with 15 min.

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