Product Datasheet

Survivin Luciferase - (LUCPorter™) Stable Reporter Cell Line
NBP2-32788

Unit Size: 1 Vial

Store in gas phase of liquid nitrogen.

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NBP2-32788
Survivin Luciferase - (LUCPorter™) Stable Reporter Cell Line

Product Information

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<tr>
<th>Unit Size</th>
<th>1 Vial</th>
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<tbody>
<tr>
<td>Concentration</td>
<td>Concentration is not relevant for this product. Please see the protocols for proper use of this product.</td>
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<tr>
<td>Storage</td>
<td>Store in gas phase of liquid nitrogen.</td>
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<tr>
<td>Reconstitution Instructions</td>
<td>Complete Growth Medium: DMEM with 4.5 g/L glucose + 10% FBS + 4 mM L-glutamine + 1 mM sodium pyruvate + 100 units/ml penicillin + 0.1 mg/ml streptomycin (Note: The selection agent for this cell line is puromycin at 3 ug/ml).</td>
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Product Description

| Description | The Survivin/LUCPorter(TM) reporter cell line is designed to monitor the induction of survivin and can be used for screening of agonists, antagonists or signaling inhibitors of survivin induction as well as for studying the survivin induction-related signaling pathways. Contents: 3~4 x 10^6 cells |
| Host        | HEK293 |
| Gene ID     | 332    |
| Gene Symbol | BIRC5  |
| Reporter Gene | Renilla luciferase |
| Growth Properties | Adherent Morphology : Epithelial |
| Selection Agent | Puromycin at 3 ug/ml |
| Immunogen   | The Survivin/LUCPorter(TM) reporter cell line is a stably transfected HEK 293 cell line which expresses an optimized Renilla luciferase reporter gene (RenSP) under the transcriptional control of the survivin promoter. Survivin (BIRC5 or IAP4) is a member of the inhibitor of apoptosis (IAP) family, which regulates apoptosis and cell cycle. Survivin is typically up-regulated in the vast majority of cancers including breast, ovarian, colorectal, gastric, prostate and pancreatic cancers, and is also known to increase tumor resistance to various apoptotic stimuli through both caspase-dependent and caspase-independent mechanisms. Hence survivin has been considered as a good target for cancer therapeutic development including suppression of survivin mRNA or inhibition of survivin expression. The Survivin/LUCPorter(TM) reporter cell line, which can be used as a tool for identification of survivin induction inhibitors, is designed to be a semi-constitutively active reporter cell line (Figure 1). This cell line is also a stimuli-inducible reporter cell line as shown in Figure 2. |

Product Application Details

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<td>Recommended Dilutions</td>
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Ligand Activation: Survivin Luciferase - (LUCPorter™) Stable Reporter Cell Line [NBP2-32788] - Figure 1. Analysis of constitutive Survivin promoter activity.

The Survivin/LUCPorter™ HEK 293 cell line as well as the Control Vector HEK 293 cell line (NBP2-29350) were plated in 96-well white plates at 5 x 10^4 cells/well. After 16 h, luciferase activity was analyzed by directly adding the complete mixture of luciferase reporter assay reagent (NBP2-25287) into each well of the plate. After 5 min, the plate was read in a plate luminometer.

Survivin Luciferase - (LUCPorter™) Stable Reporter Cell Line [NBP2-32788] - Figure 2. Enhancing effects of PMA on Survivin promoter activity. The Survivin/LUCPorter™ HEK 293 cell line as well as the Control Vector HEK 293 cell line (NBP2-29350) were plated in 96-well white plates at 5 x 10^4 cells/well. Cells were treated with various concentrations of phorbol 12-myristate 13-acetate (PMA) for 16 h. Luciferase activity was then analyzed by directly adding the complete mixture of luciferase reporter assay reagent (NBP2-25287) into each well of the plate. After 5 min, the plate was read in a plate luminometer.
Procedures

Product Handling Protocol (NBP2-32788)

Note: To ensure the highest cell viability, it is strongly recommended that one should thaw the vial and initiate the cell culture as soon as possible upon receipt. If continued storage of the frozen vial upon receipt is necessary, it should be immediately stored in liquid nitrogen but not at -80°C. Storage at -80°C will lead to significant loss of cell viability. Please read the entire data sheet before thawing. It is recommended that users follow good tissue culture practice. The reporter line is sterile and all work should be performed under sterile conditions.

1. Prepare a sterile 15-ml tube with 9 ml fresh medium without selection agents pre-warmed at 37°C.

2. Thaw the frozen cell vial quickly in a 37°C water bath, keeping the cap portion out of the water to avoid any possible contamination.

3. Upon thawing, take the vial out of the water and clean it with 70% ethanol to decontaminate.

4. Transfer contents to the 15-ml tube (Step 1) and mix with medium by gentle inversion of tube.

5. Centrifuge at 1,000 RPM for 5 minutes.

6. Remove supernatant and resuspend cells in 10 ml of fresh medium without selection agents. Note: It is important to grow the cells at this stage without selection agents.

7. Transfer cells into a 25-cm² tissue culture flask and incubate at 37°C in a 95% air-5% CO₂ mixture.

8. After cells settle down (in 1-3 days), remove the medium containing minor floating cells and replace with fresh complete growth medium containing selection agents.

9. Whenever the cells are 70-80% confluent, detach the cells by trypsinization and split into new flasks with fresh complete growth medium.

10. Freeze the reporter cell line at 3-4 x 10⁶ cells/ml per cryogenic vial. For optimal cell viability after freezing, freeze cells when they have reached log phase growth (95-98% confluency). Detach cells by trypsinization at 37°C for 5 min, and harvest cells by mixing with 3 volumes of fresh medium followed by centrifugation (Step 5). Re-suspend the cell pellet in freeze media (FBS with 10% DMSO). Add cell suspension to cryogenic vials in 1 ml aliquots. Place cryogenic vials, in a tissue culture approved cryogenic vial container, in -80°C Freezer for 24-48 hours. After 24-48 hours, move the vials into liquid nitrogen storage.

Product Handling Guide (NBP2-32788)
Assume all cultures are hazardous since they may harbor latent viruses or other organisms that are uncharacterized. The following safety precautions should be observed.

Use pipette aids to prevent ingestion and keep aerosols down to a minimum.

No eating, drinking or smoking while handling cells.

Wash hands after handling cultures and before leaving the lab.

Decontaminate work surface with disinfectant or 70% ethanol before and after working with cells.

All waste should be considered hazardous.

Dispose of all liquid waste after each experiment and treat with bleach.
Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Reporter Cell Lines are guaranteed for 1 year from date of receipt.

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