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## Data Sheet

### **T-Rex™ HEK293 Recombinant Cell Line Catalog #: 71227**

#### **Product Description**

Recombinant HEK293 cell transfected with tetracycline repressor gene. This cell line is validated for response to the stimulation of doxycycline.

#### **Background**

The T-Rex cell line expresses the tetracycline repressor protein. Cells are transfected with the gene of interest under control of a minimal promoter and the tet operon. The Tet repressor protein binds to the operon and represses transcription. Tetracycline regulation is based on the binding of either tetracycline (or doxycycline) to the Tet repressor protein, which de-represses the promoter controlling expression of the gene of interest.

#### **Application**

This cell line is designed for transient tetracycline-inducible protein expression of the target gene in mammalian cells.

#### **Format**

Each vial contains  $1.5 \times 10^6$  cells in 1 ml of 10% DMSO

#### **Storage**

Immediately upon receipt, store in liquid nitrogen.

#### **Culture Conditions**

**Thaw Medium 1 (BPS Cat. #60187):** MEM medium (Hyclone #SH30024.01) supplemented with 10% FBS (Invitrogen #26140-079), 1% non-essential amino acid (Hyclone #SH30238.01), 1 mM Na pyruvate (Hyclone #SH30239.01), 1% Penicillin/Streptomycin (Hyclone SV30010.01)

**Complete Growth Medium:** Thaw Medium 1 (BPS Cat. #60187) and 5 µg/ml of Blastidicin (Invitrogen #R210-01).

Cells should be grown at 37°C with 5% CO<sub>2</sub> using **complete growth medium**.

If culturing cells in medium from other vendors, it may be required to lower the percentage of CO<sub>2</sub> in the incubator depending on the NaHCO<sub>3</sub> level in the basal medium.

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It is recommended to quickly thaw the frozen cells from liquid nitrogen in a 37°C water-bath, transfer to a tube containing 10 ml of Thaw Medium 1 (**no Blastcidin**), spin down cells, resuspend cells in pre-warmed Thaw Medium 1 (**no Blastcidin**), transfer resuspended cells to T25 flask and culture at 37°C in CO<sub>2</sub> incubator. The next day, replace the medium with fresh Thaw Medium 1 (**no Blastcidin**), and continue growing culture in a CO<sub>2</sub> incubator at 37°C until the cells are ready to be split. Cells should be split before they reach complete confluence. At first passage switch to complete growth medium (**contains Blastcidin**). Cells should be split before they reach complete confluence.

To passage the cells, rinse cells with phosphate buffered saline (PBS), detach cells from culture vessel with Trypsin/EDTA, add complete growth medium and transfer to a tube, spin down cells, resuspend cells and seed appropriate aliquots of cell suspension into new culture vessels.

*Note: Just after thawing and at low density, the cells may grow at a slower rate. It is recommended to split the cells with ~ 1:4 ratio at the beginning of culturing. After several passages, the cell growth rate increases and the cells can be split with 1:8 -1:20 ratio weekly.*

#### **References**

On the use of the T-Rex tetracycline-inducible gene expression system in vivo. Dobrovolsky VN<sup>1</sup>, Heflich RH. 2007. *Biotechnol Bioeng.* 98(3):719-23.

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