

Cell name: HEK293 x GFP
Cat. No. H-0271

Product description

HEK293 x GFP was established by lentiviral transduction of green fluorescent protein (GFP) cDNA into HEK293 cells and flow cytometry sorting of the GFP-positive population.

Transgene construct information

Expression cassette type

Single-promoter, monocistronic

Expression cassette map



Expression cassette features

Element	Type	Species	RefSeq	Mutation / Discrepancy
EF1 α	promoter, eukaryotic, constitutive	-	-	-
GFP	CDS	-	-	none / none

Transgene protein information

Green fluorescent protein (GFP), originally isolated from the jellyfish *Aequorea victoria*, has gained broad application in cell and molecular biology as a fluorescent marker and reporter of gene expression. Wild-type GFP is a 26.9 kDa protein with beta barrel structure that folds spontaneously and becomes fluorescent at room temperature or 37°C in heterologous expression systems. Since its discovery, numerous variants with altered excitation and emission properties have been engineered. The variant introduced into HEK293 is most efficiently excited around 490 nm and emits at 509 nm. GFP-labeled HEK293 cells can be utilized, among others, for high-throughput drug testing assays.

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Cell culture characteristics

Morphology

Epithelial

Growth properties

Adherent

Culture conditions

Culture cells at 37°C in humidified atmosphere with 5% CO₂. The base medium for this cell line is D-MEM with 4.5 g/l glucose. To make the complete growth medium, add fetal bovine serum to a final concentration of 10%.

Subculturing

Remove culture medium and detach cells by treating with 0.04 ml/cm² of 0.25% trypsin / 1 mM EDTA solution for 15 minutes at 37°C. Add 5x volume of complete medium to neutralize trypsin-EDTA, pellet cells at 250 x *g*, discard supernatant, and resuspend in culture medium. Subcultivate in a ratio of 1:10. Recommended plating density: 4x10⁴ cell/cm².

Preservation

Freeze Medium: Complete growth medium with 10% DMSO.

Storage Temperature: Liquid nitrogen vapour phase.

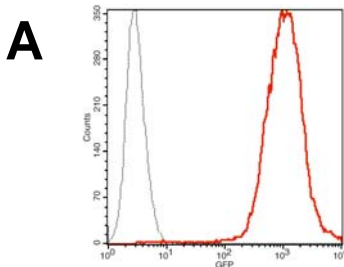
Population doubling time

~24 hours

Sterility testing

Mycoplasma: negative

Validation results



A: Red line HEK293 x GFP

Dotted line: HEK293

Detection of GFP fluorescence by flow cytometry at 509 nm.

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