

# Culturing HEK 293 FT cells

Created on: 01-03-2019 - Last modified on: 28-02-2022

## SCOPE OF THE METHOD

<b>The Method relates to</b>	Human health
<b>The Method is situated in</b>	Basic Research, Translational - Applied Research
<b>Type of method</b>	In vitro - Ex vivo
<b>This method makes use of</b>	Human derived cells / tissues / organs
<b>Specify the type of cells/tissues/organs</b>	Human embryonic kidney 293 FT cells

## DESCRIPTION

### Method keywords

Culturing

Transfection

Viral production

High viral titer

## Scientific area keywords

Viral production

High viral titer

Clinical translation

Cellular reprogramming

## Method description

Human embryonic kidney (HEK) 293 FT cells is a cell line that is very easy to culture and is used to obtain high viral titers. "293" is a reference to the 293<sup>th</sup> experiment wherein the cell line was discovered. A transfection with an adenovirus type 5 DNA fragment took place, causing the cell line to express E1A adenoviral gene. This stimulates the transcription of specific viral genes, resulting in a high production of viral proteins. "T" means that the HEK293 cell line is transfected with the SV40 T antigen, also stimulating the production of viral proteins. "F" stands for a fast growing HEK 293T strain with a high transfection efficiency.

## Lab equipment

Biosafety cabinet;

Microscope;

Incubator.

## Method status

History of use

## PROS, CONS & FUTURE POTENTIAL

### Advantages

High viral titer;  
Easy to culture;  
Fast growing;  
Easy to transfect.

## Challenges

Use of serum.

## REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

### Associated documents

## PARTNERS AND COLLABORATIONS

### Organisation

**Name of the organisation** Vrije Universiteit Brussel (VUB)

**Department** Pharmaceutical and Pharmacological Sciences

**Specific Research Group or Service** In Vitro Toxicology and Dermato-Cosmetology

**Country** Belgium

**Geographical Area** Brussels Region

*Coordinated by*



*Financed by*

