

WE MAKE THE CELLS

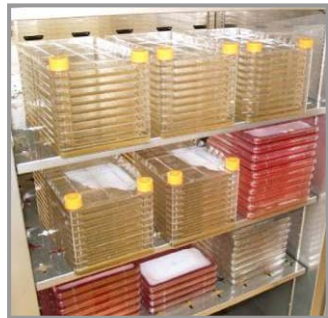
Instant Cell Supply Using MaxCyte STX™



CCS CELL CULTURE SERVICE 

WE MAKE THE CELLS

Use of Frozen Instant Cells for HTS



Bulk production of assay cells



Automatic filling of cells into cryovials



Controlled rate cryopreservation



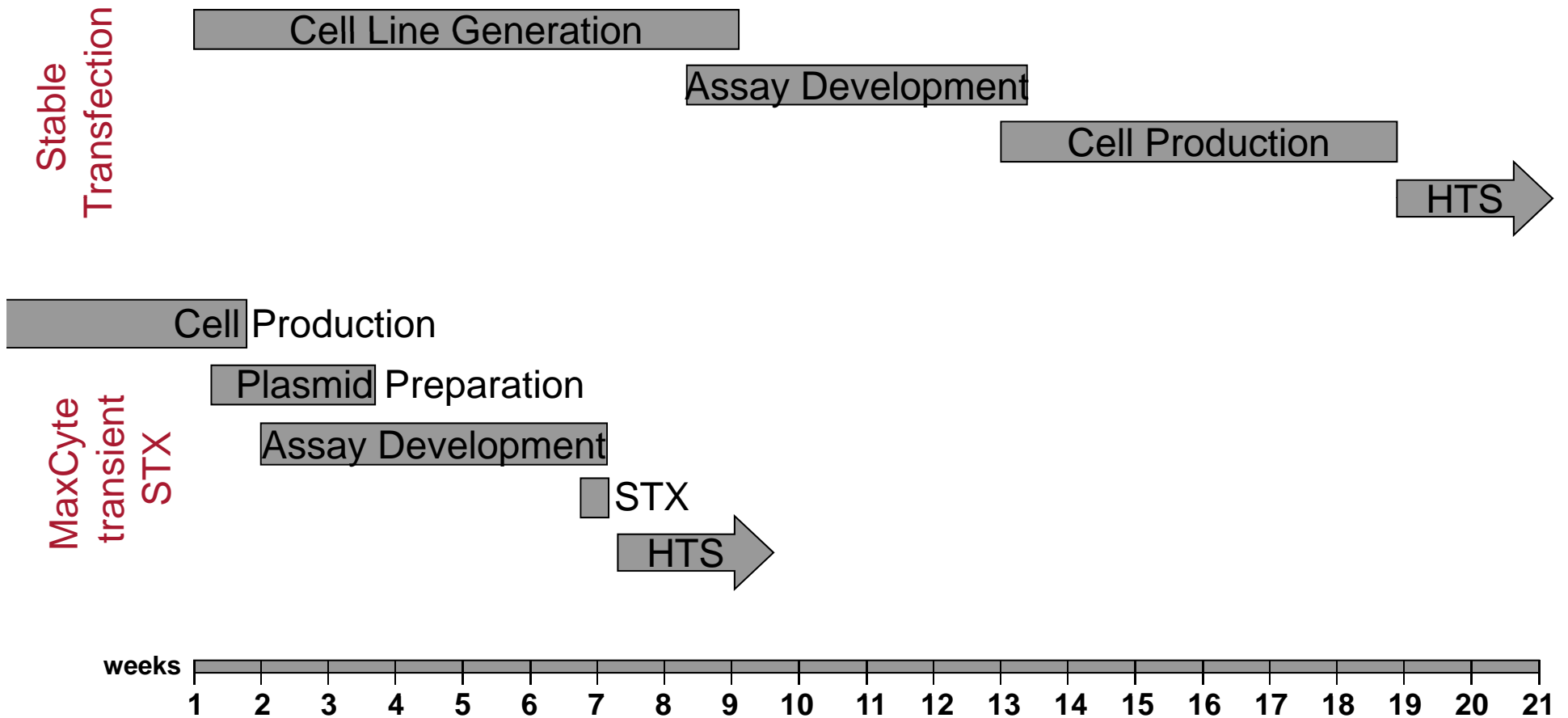
Storage in liquid nitrogen



Thawing of Frozen Instant Cells and dispensing into assay plates at the day of use

WE MAKE THE CELLS

Time Lines

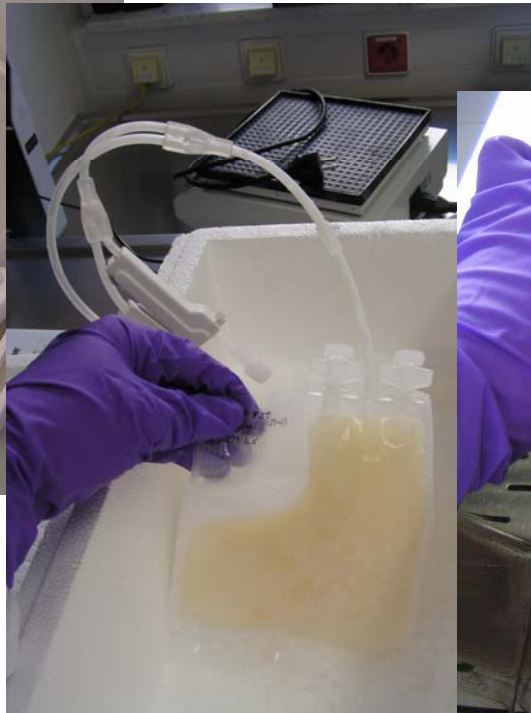


WE MAKE THE CELLS

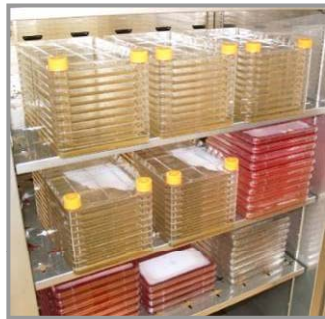
Preparation of Frozen Host Cells in Blood Bags



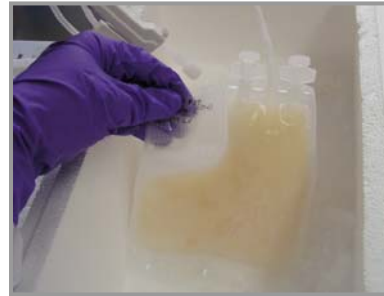
Freezing 5 to 10 billion cells in a single bag



Custom Bulk Transfection



Bulk production of host cells



Cryopreservation of host cells in blood bags



Bulk transfection in MaxCyte STX™



Automatic filling of cells into cryovials



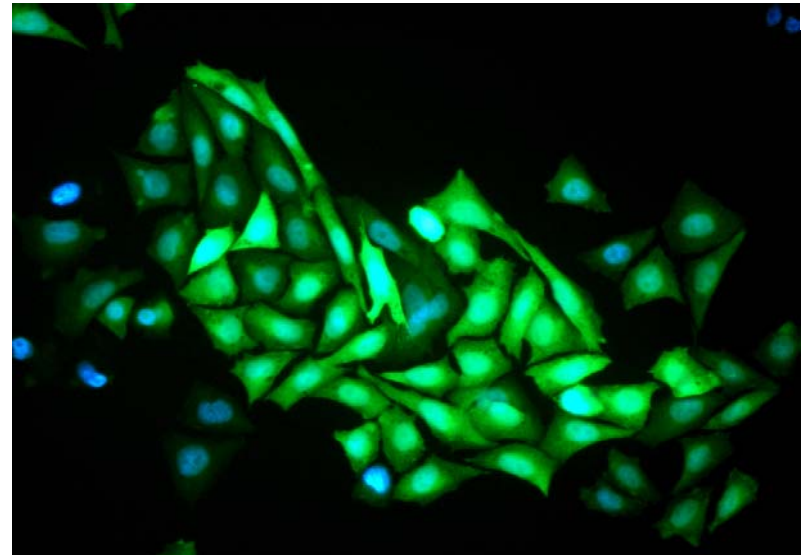
Controlled rate cryopreservation



Storage in liquid nitrogen

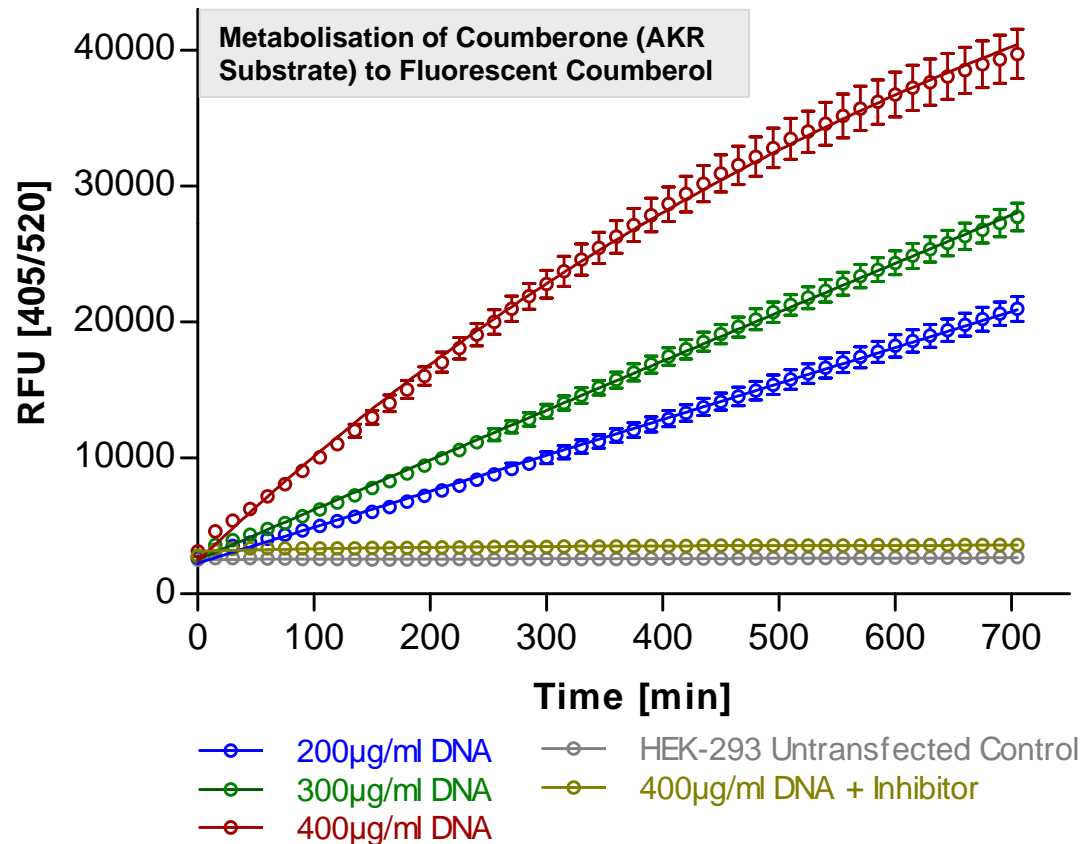
Transfection of Cryopreserved CHO-K1 Cells with GFP

- Upscaling of CHO-K1 cells in CellStacks.
- Cryopreservation in 180 ml blood bags at 1E7 cells/ ml with 10% DMSO.
- Storage of blood bags at -80° C.
- Thawing of cells in blood bags at 37° C.
- Washing of cells in EP buffer (MaxCyte).
- Electroporation of cells with GFP expression vector (100 µg/ml) in CL2.
- Cultivation for 24 hours in S500 plates.
- Harvest of cells and cryopreservation in vials.
- Thawing of cells and detection of GFP.



	Cell Number	Viable Yield	Viability
Scale Up	1.4 E9 cells	100 %	96,5 %
Blood Bag	1.1 E9 cells	78.6 %	94.4 %
Electroporation	7.1 E8 cells	50.7 %	94.6 %
24 hours post EP	6.1 E8 cells	43,6 %	95,61

Transient Expression of Aldo-Keto-Reductase in HEK293



- HEK-293 (3E7 cells)
- Electroporation with different concentrations of DNA in OC400.
- Harvest 24 h after transfection.
- Preparation of Frozen Cells.

Viable Yield (24 h after EP)

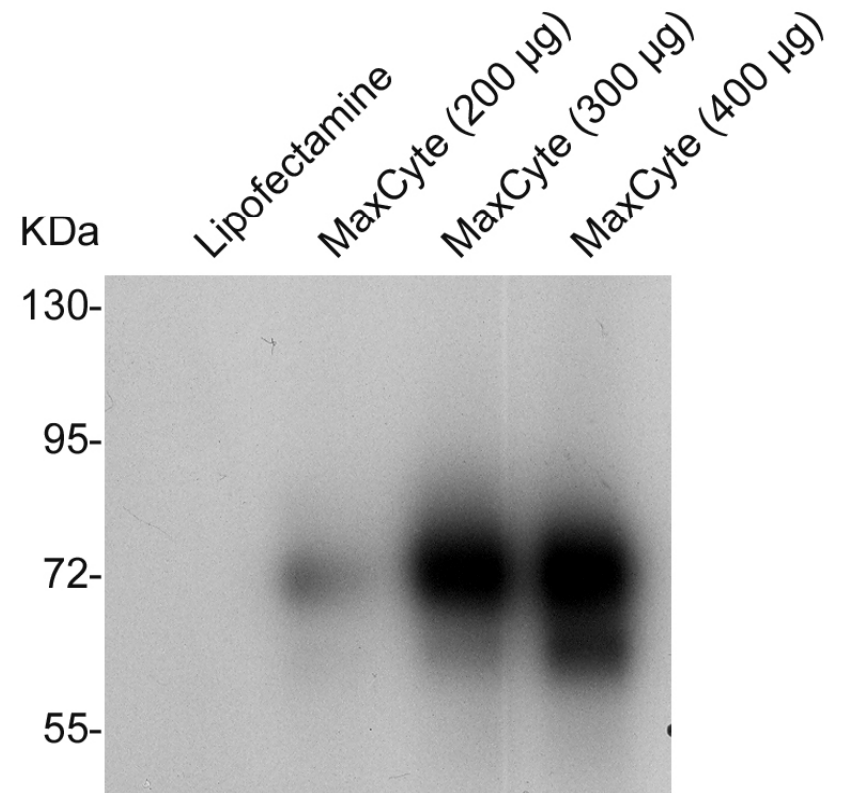
200 µg/ml DNA:	69.3 %
300 µg/ml DNA:	89.3 %
400 µg/ml DNA:	9.1 %
Control:	88.6%

Scale Up:

- Electroporation of 1E9 cells in CL2 using 300 µg/µl DNA
- Harvest 24 h after transfection.
- Viable Yield : 92.4 %

Transient Expression of BACE Protein in HEK Cells

- Upscaling of HEK293.
- Electroporation of 4E7 cells with BACE expression vector (200 to 400 µg/ml) in OC400.
- Cultivation for 24 hours in S500 plates.
- Harvest of cells by scraping (4 pellets á 1E7).
- Lysis of cells in SDS buffer (1ml / pellet).
- Westernblot analysis of BACE (5.000 cells) using monoclonal antibody (Santa Cruz).



Custom Cell Supply by CCS

- Assay-ready transiently transfected *Frozen Instant Cells*.
- Membranes from transiently transfected cell.
- Recombinant proteins from transiently transfected cells.