

4D-Nucleofector[®] LV Unit for large-scale transfection

Efficient, closed and scalable transfection for ex vivo cell and gene therapy applications

Experience the 4D-Nucleofector[®] LV Unit which expands our proven 4D-Nucleofector[®] System to larger scale transfection.

The LV Unit allows for closed, scalable *ex-vivo* modification of human primary cells in the range of 1×10^7 to 1×10^9 cells. Transfection protocols can be established in smaller scale using the X Unit and subsequently transferred to the LV Unit without the need for re-optimization. It supports numerous applications, such as CAR-T cell generation, CRISPR genome editing and allows you to quickly translate research results into a GMP compliant cell therapy manufacturing process.

Benefit from

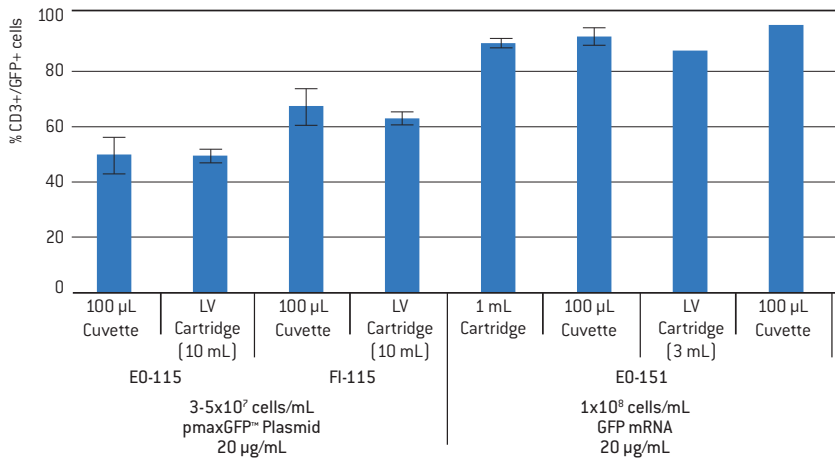
- Closed system – Sterile Nucleofection of up to 10^9 cells
- Real scalability – Optimization in small scale
- Established protocols – Benefit from 700+ optimized cell types
- Simple handling – Minimal training needs
- 4D-Nucleofector[®]LogWare – Optional operation via 21CFR part 11 compliant software
- TheraPEAK[®] Nucleofector[®] Consumables – Expediting your path towards a GMP process



4D-Nucleofector[®] System with Core and LV Unit and mounted LV Nucleocuvette[®] Cartridge

Contact your local sales representative for more information.

Transferability from small to large scale



Transfection of human T cells with plasmid DNA or mRNA

Fresh PBMCs were transfected with either pmaxGFP⁺ Plasmid or GFP mRNA using a 100 µL Nucleocuvette[®] Vessel, a 1 mL Nucleocuvette[®] Cartridge or a flow-through LV Nucleocuvette[®] Cartridge. Transfection efficiency in CD3-positive T cells was analyzed 24 hours post Nucleofection[®]. Plasmid data represent the mean of various independent experiments. mRNA data are based on duplicates (small scale) or unicates (large scale).

Two formats available in research or GMP quality



1 mL Nucleocuvette[®] Cartridge

- 1 mL fixed volume
- Up to 1 × 10⁸ cells
- Manual filling via sterile injection port



LV Nucleocuvette[®] Cartridge

- Up to 20 mL processing volume (in 1 mL steps)
- Up to 1 × 10⁹ cells
- Automatic filling via 4D-Nucleofector[®] LV reservoirs or bags
- Version with PVC tubing extension available for sterile welding

Cat. No.	Description	Size
Devices and accessories		
AAF-1002B	4D-Nucleofector [®] Core Unit	1 unit
AAF-1002X	4D-Nucleofector [®] X Unit	1 unit
AAF-1002L	4D-Nucleofector [®] LV Unit Including 2 LV Reservoir Racks	1 unit
AAK-3001	4D-Nucleofector [®] LV Reservoir Rack	1 unit
SAAF-1001	4D-Nucleofector [®] LogWare	1 unit
Research-grade kits*		
V4LP-3002	P3 Primary Cell 4D-Nucleofector [®] LV Kit L Including 2 – 1 mL Nucleocuvette [®] Cartridges	2 reactions
V4LP-3020	P3 Primary Cell 4D-Nucleofector [®] LV Kit XL Including 1 LV Nucleocuvette [®] Cartridge (non-weldable) and 2 LV Reservoirs	1 reaction
V4LP-3520	P3 Primary Cell 4D-Nucleofector [®] LV Kit XL Including 5 LV Nucleocuvette [®] Cartridge (non-weldable) and 10 LV Reservoirs	5x1 reaction
V4LN-7020W**	LV Nucleocuvette [®] Cartridge, weldable tubing	1 reaction
V4LR-1001W	4D-Nucleofector [®] LV Reservoirs, weldable tubing	2 pieces
GMP-grade consumables		
G4LP3-22500	TheraPEAK [®] P3 Nucleofector [®] Solution Set	22.5 mL + 5 mL
G4LP3-126000	TheraPEAK [®] P3 Nucleofector [®] Solution Set	126 mL + 28 mL
G4LN-7501	TheraPEAK [®] 1 mL Nucleocuvette [®] Cartridge – coming soon	5 reactions
G4LN-7520W	TheraPEAK [®] LV Nucleocuvette [®] Cartridge, weldable tubing	5 reactions
G4LR-1501W	TheraPEAK [®] 4D-Nucleofector [®] Reservoir, weldable tubing	5 reactions

* Further variants and kits for cell lines are available

**For separate Solution Set, please contact your local sales representative

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CT-TS007 05/21

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