



# LentiBOOST technology – Boost lentiviral transduction efficiency.

## Mode of action

LentiBOOST™ is an effective, non-cytotoxic transduction enhancer for research and clinical application of lentiviral in a wide range of cell types vectors. It is a universal receptor-independent adjuvant which facilitates fusion of lentivirus with the cell membrane, increases vector copy number, and improves transduction efficiency.

## Ideal for a wide range of cell types

LentiBOOST technology can be applied to a wide range of clinically relevant cell types, including CD34+ hematopoietic stem cells (HSC), mesenchymal stem cells (MSC), neuronal stem cells, primary T cells, hard-to-transduce murine T cells, NK cells, and fibroblasts. It is ideal for clinical transduction protocols for ex vivo gene therapies and CAR-T cell therapies.

## Benefits for drug development



### Improved lentiviral transduction efficiency

Increases the expression levels of therapeutic protein



### Increased and titratable vector copy number per cell

Helping to lower manufacturing costs



### Easy-to-use

Easy to integrate into transduction protocols - no coating of dishes required



### Pharma and GMP grade batches

Available as GMP grade with documentation for clinical trials

**LentiBOOST technology is currently being used in 40 active clinical trials and 2 products approved by the relevant regulatory agencies.**

## Efficient for various cell types

Cell Type	Transduction Efficiency Ratio with LentiBOOST*	Cell Type	Transduction Efficiency Ratio with LentiBOOST*
1. Human CD34+ HSC	1.6–7x	6. Human Fibroblasts	2x
2. Human CD8+ T cells	1.6–3x	7. Human PMBC	2–3x
3. Human CD4+ T cells	1.5x	8. Murine CD8+ T cells	2x
4. Human CD3+ T cells	6.5x	9. Murine CD4+ T cells	2.7x
5. Human NK cells	3x		

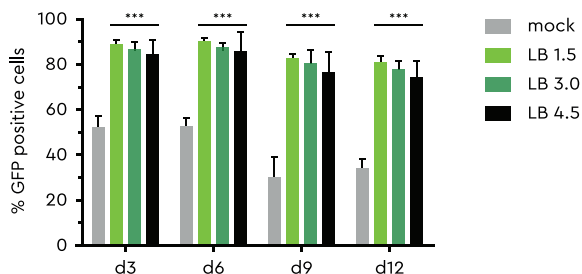
\*Unit: -fold increase in transduced cells. Based on customer data. The range depends on the experimental setup, vector design, and transduction protocols.

## The results speak for themselves

Our customers use LentiBOOST technology in numerous preclinical and clinical programs with different cell types. Below is selected data from the global research community already using LentiBOOST transduction enhancer.

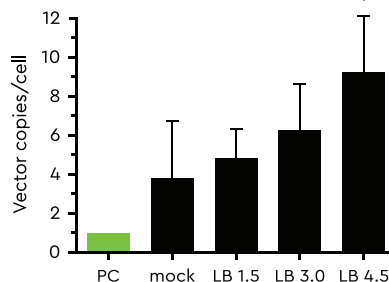
### Stable transduction increase for HSC

Number of GFP-positive human CD 34+ PBSC transduced with lentivirus and LentiBOOST transduction enhancer at various concentrations reach up to 80% at day 12 posttransduction.<sup>1</sup>



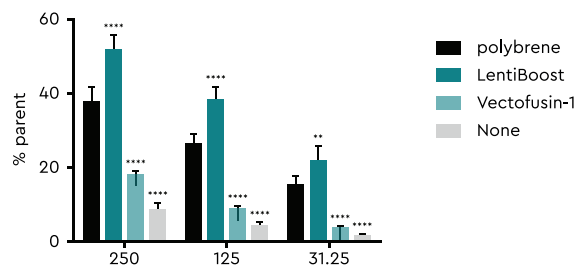
### Optimal copy number per cell

Using various LentiBOOST concentrations, vector copy number per cell can be titrated to optimum alignment with EMA/FDA safety guidelines.<sup>1</sup>



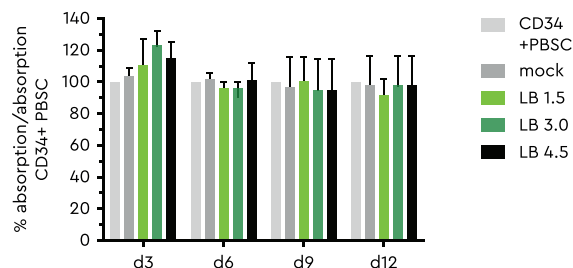
### For human T cells

T-cells were transfected with LentiBOOST transduction enhancer at different concentrations.<sup>3</sup>



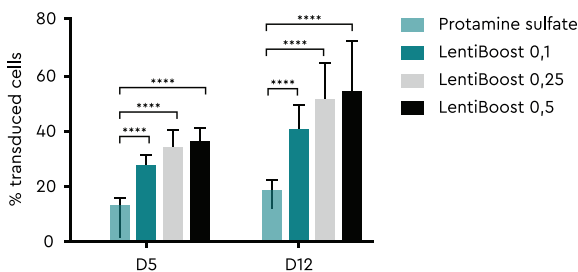
### Non-toxic to blood cells

HSC treated with LentiBOOST technology demonstrated the same viability as the control cells.<sup>1</sup>



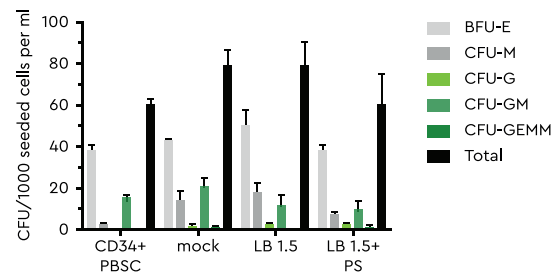
### For murine hard-to-transduce cells

Murine T-cells were transfected with LentiBOOST technology at different concentrations.<sup>2</sup>



### Healthy HSC differentiation potential

LentiBOOST transduction enhancer does not affect the ability of HSC to differentiate into various hematopoietic lineages.<sup>1</sup>



1 Hauber et al., Human Gene Therapy Methods, Volume 29, Number 2, 2018  
 2 Delville et al., Molecular Therapy: Methods & Clinical Development, Vol. 10 September 2018  
 3. Customer data, 2019

For more information visit [www.revvy.com/lentiboost](http://www.revvy.com/lentiboost)

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