SRT-LVL

LVV SIZE EXCLUSION COLUMNS

SRT-LVL SEC

This LC column is purpose-built for gene therapy and CAR-T workflows which rely heavily on lentiviral vectors (LVVs). Featuring an ultra-wide 2000 Å pore architecture engineered for the toughest large biomolecule separations, from the analysis of lentivirus aggregation to lipid nanoparticles.

TARGET APPLICATIONS

Lentiviral Vectors
Aggregate profiling & intact particle recovery

Lipid Nanoparticles
mRNA-LNP formulation & stability

Plasmid DNA
High MW nucleic acid separation

sgRNA & Long Oligos
CRISPR guide RNA characterization

Viral-Like Particles
VLP size distribution & purity

PEG/Lipid Conjugates
"Sticky" biologic analysis

KEY ADVANTAGES

2000 Å
Ultra-Wide Pore Architecture
Purpose-built for viral-sized particles. Achieves true size-exclusion of lentiviral vectors, aggregates, and LMW impurities without pore occlusion.

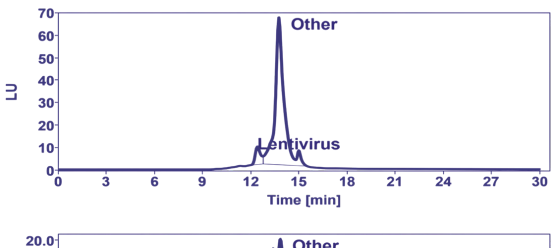
Hydrophilic
Coated Surface
Minimizes nonspecific interaction, resulting in improved recovery, enhanced peak symmetry, and more consistent size-based separation.

300 x
Exceptional Column Lifetime
Negligible performance deterioration after 300+ injections (150 mM phosphate, pH 7.0). Full-coverage bonded silica packing for unrivaled stability.

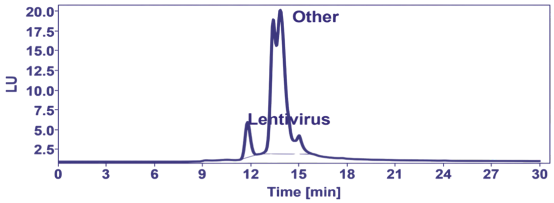
Versatility
Detector Flexibility
Low-noise baseline ensures seamless compatibility with UV, FLD, and SEC-MALS detection. Enables absolute determination of particle size and aggregation state.

TECHNICAL SPECIFICATIONS

Particle (µm)	5
Pore (Å)	2000
ID (mm)	4.6, 7.8
Length (mm)	50, 300
pH range	5.0–7.5 (optimal) 2.5–8.5 (extended)
Max pressure (psi)	2,000
Max temp (°C)	80
MP compatibility	Phosphate, TRIS, NH_4OAc, aqueous
Detection	UV, FLD, SEC-MALS



COMPETITOR
SEC 2000 Å
3 µm
4.6x300 mm



SEPAX
SEC 2000 Å
5 µm
4.6x300 mm

Our Matica Biotechnology collaboration delivers market-leading LVV analysis with superior sensitivity, clearer resolution than competitors, and SEC-MALS compatibility for mass and size.

METHOD OPTIMIZATION INSIGHT

Ionic strength tuning is critical for lentivirus SEC. Moderate salt increases (e.g., 50 mM KCl) reduce electrostatic interactions for better HMW aggregate resolution, while excessive ionic strength reduces LMW selectivity. Optimal starting condition: 80 mM phosphate, 50 mM KCl, pH 6.5.

SURFACE TECHNOLOGY

Proprietary nanometer-thick hydrophilic film chemically bonded to high-purity spherical silica. The specialized neutral coating minimizes secondary interactions with lipid-enveloped viral particles, PEG-conjugated biologics, and other inherently "sticky" large biomolecules, ensuring separation is governed strictly by size exclusion.

Lentiviral vectors · LNPs · sgRNA · Plasmid DNA · Water-soluble polymers · VLPs · PEG conjugates

COLUMN SCREENING SERVICE

Not sure which column or mobile phase to use? Sepax offers a full column screening and method development service. Rapid, cost-effective, and tailored to your sample type.

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