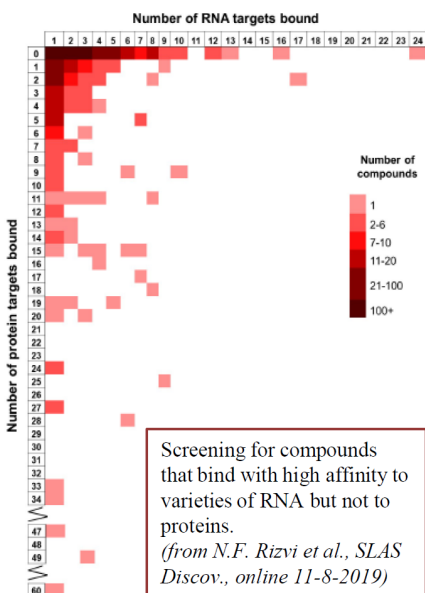


High-Throughput Screening (HTS) with Size Exclusion Chromatography (SEC)



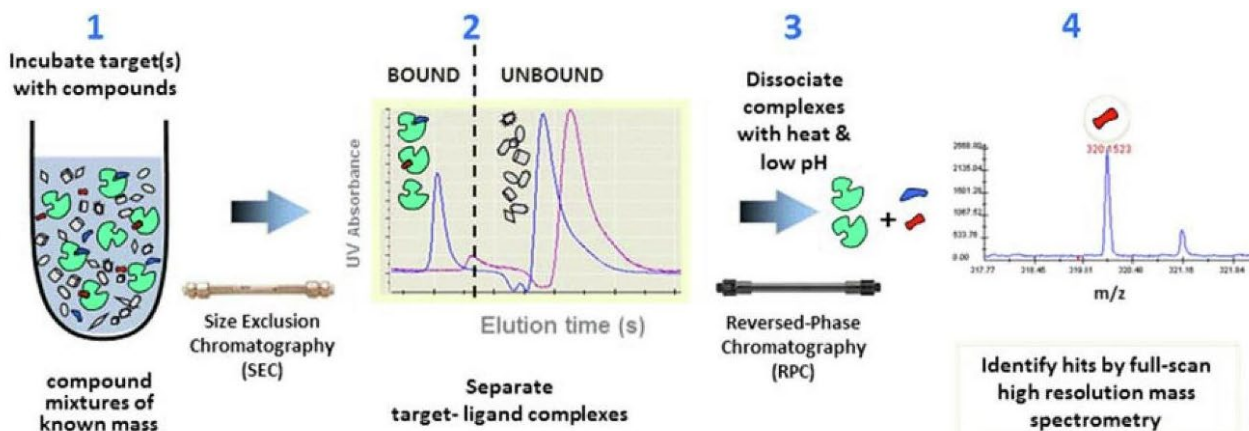
For over 20 years, pharmaceutical companies have relied on our SEC columns to screen combinatorial libraries of up to 2,000 components per run to identify small molecules that bind with high affinity to a large target entity.

No derivatization or special equipment is needed. The target can be a protein, a whole organelle such as a ribosome, a riboswitch, or the folded DNA of a promoter region.

Strongly bound molecules migrate through the SEC column with the target and elute in the V_0 peak instead of in the V_t peak with the rest of the small molecules. The small molecules in the V_0 peak are then identified and a new library is synthesized with features in common with the high-affinity subset. Several such iterations may produce a drug candidate with very high affinity ($K_d < 100$ nM) and selectivity.

Rapid SEC Ensures Limited Diffusion

Completing SEC in less than one minute prevents high-affinity molecules from diffusing off the target. PolyLC's SEC columns can separate the V_0 and V_t peaks to baseline under these conditions, which is essential for preventing false positives.



(from N.F. Rizvi and E.B. Nickbarg, *Methods* 167 (2019) 28)

This method is usually implemented with the following PolyHYDROXYETHYL A™ columns:

- PN: 051HY03006 50 X 1.0mm column containing PolyHYDROXYETHYL A 3- μ m, 60- \AA
- PN: 051HY05006 50 X 1.0mm column containing PolyHYDROXYETHYL A 5- μ m, 60- \AA
- PN: 052HY03006 50 X 2.1mm column containing PolyHYDROXYETHYL A 3- μ m, 60- \AA
- PN: 052HY05006 50 X 2.1mm column containing PolyHYDROXYETHYL A 5- μ m, 60- \AA

Also available: Other column dimensions and pore sizes. Guard cartridges and reusable holders are available for all material combinations.

Contact us at: info@polylc.com PolyHYDROXYETHYL A is a trademark of PolyLC Inc.