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UNCHAINED LABS

Epic Gene Therapy Tools

Combine and conquer

Stunner is the only system that pulls together UV/Vis concentration, dynamic light scattering and static light scattering data from the same 2 µL sample. Dig in to your AAV by bringing protein and ssDNA concentrations together with light scattering to get the total capsid titer and empty/full ratio. Without skipping a beat, you'll know if your AAV is good to go.

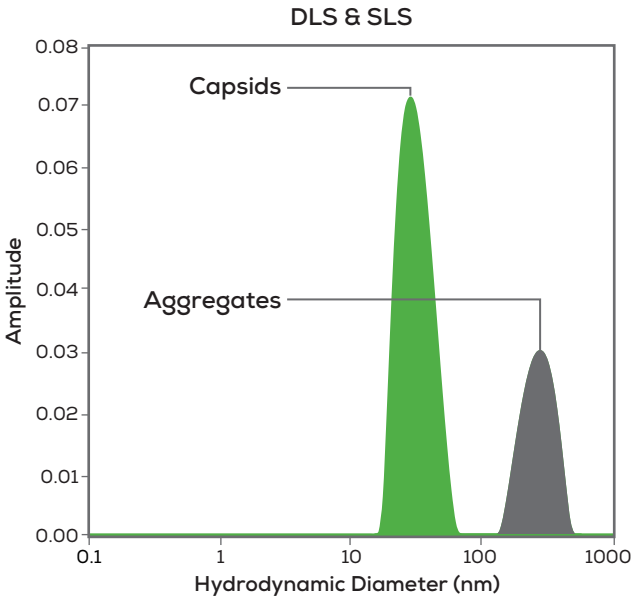
AAV capsid titer

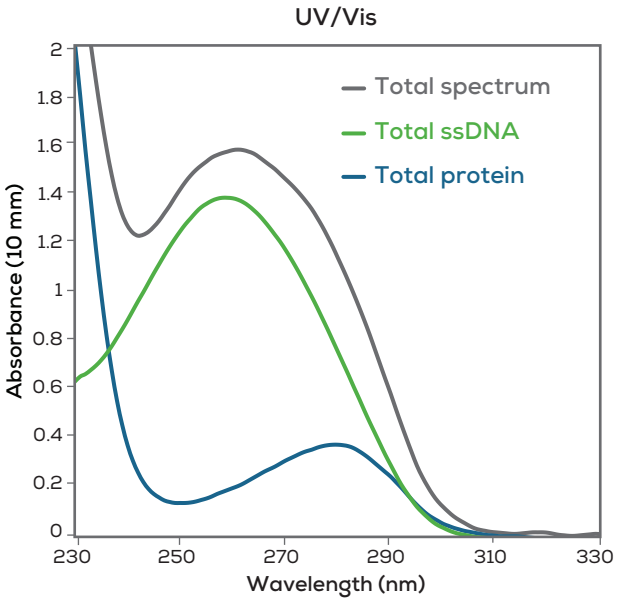
AAV empty/full ratio

Aggregation

Teeny sample, tons of info

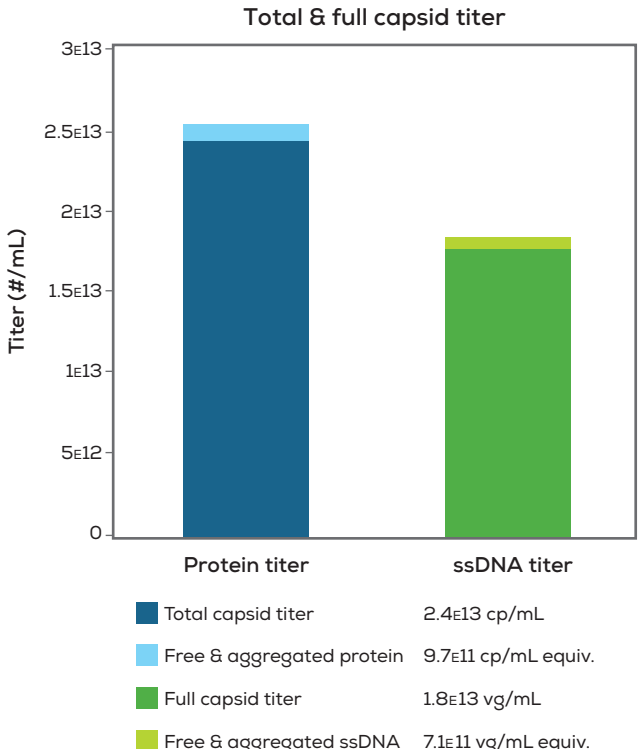
Drop in 2 µL of your AAV and before you can blink, DLS & SLS figure out how many intact capsids you have or if a bunch of aggregates are screwing things up. See empty/full ratio, total protein and total ssDNA in about a minute with UV/Vis. Don't worry about extinction coefficients or overlapping spectra – Stunner does all the math for you.

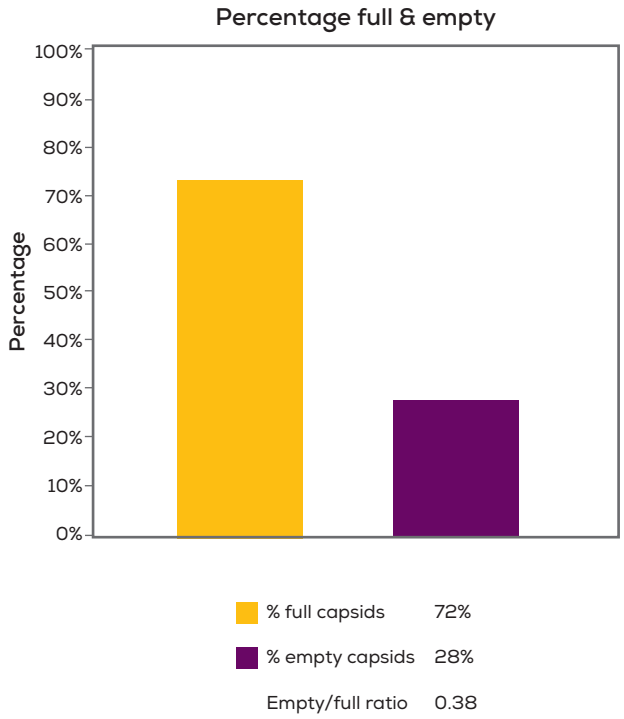




Know your AAV inside out

Get to the numbers you actually want – titers. Stunner bridges DLS and UV/Vis data to tally up how many full and empty capsids are present, and how much extra protein and DNA is left over. Take your cleaned up AAV and sneak a peek down to 10^{12} vg/mL. In just one assay, Stunner's dye-free, label-free, standard-free, hassle-free workflow tells the whole titer story.





Cut loose from manual buffer exchange

Buffer exchange is the time consuming, hands-on chore you have to deal with before all the things you really want to do with your AAV, VLP, or LNP. Big Tuna automates exchange to efficiently clean up, reformulate and concentrate just how you like it. Skip the old, slow, manual ways of filtering, concentrating or buffer exchanging your samples to free yourself up for other critical gene therapy work.

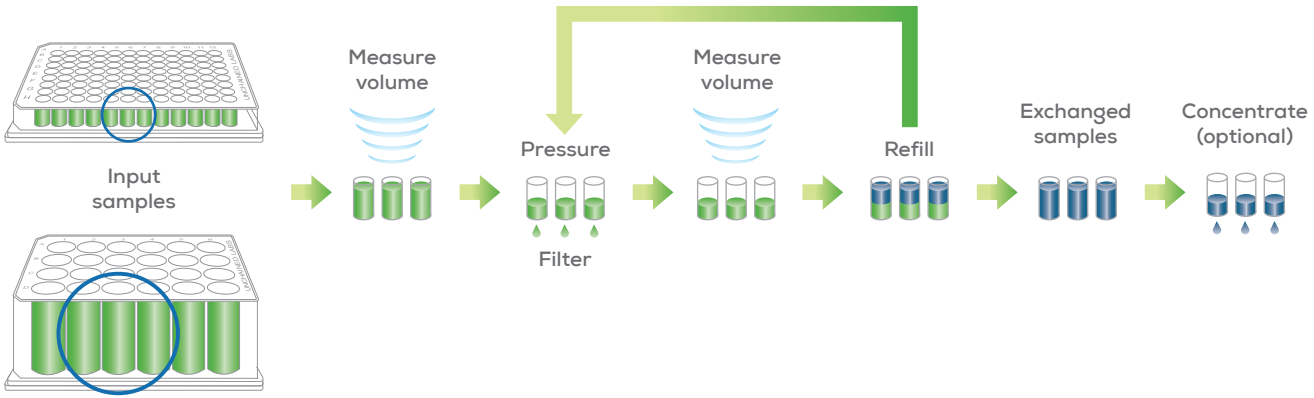
Clean up

Concentrate

Buffer exchange

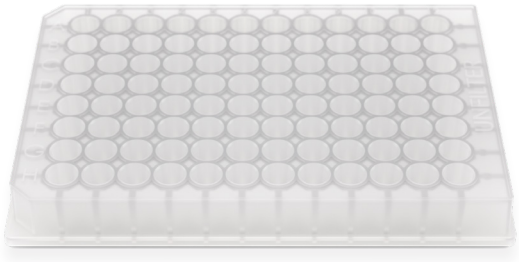
Always come out even

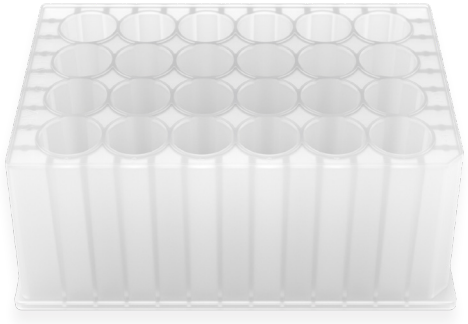
Big Tuna keeps buffer exchange even across the plate by combining pressure-based UF/DF and gentle orbital mixing. Swap out your buffer and amp up your concentration steps. Big Tuna always treats your sample carefully so concentrations for AAVs, VLPs, and LNPs come out spot-on.



Go big or keep it small

Big Tuna serves up two consumables to tackle any volume requirement. Use Unfilter 96 to exchange as little as 100 µL on as many as 96 different samples at the same time. Unfilter 24 lets you go big and exchange as much as 8 mL on up to 24 samples. No matter how you roll, Big Tuna can handle it.





Dominate AAV capsid stability

Uncle teams up with SYBR Gold to get a read on when your DNA starts to leak – way before AAV capsids pop at higher temps. Track the disruption of your capsids with protein intrinsic fluorescence or tag in DLS and know if you've got problems with aggregation. Uncle packs three unique technologies into one instrument to answer all your AAV stability questions.

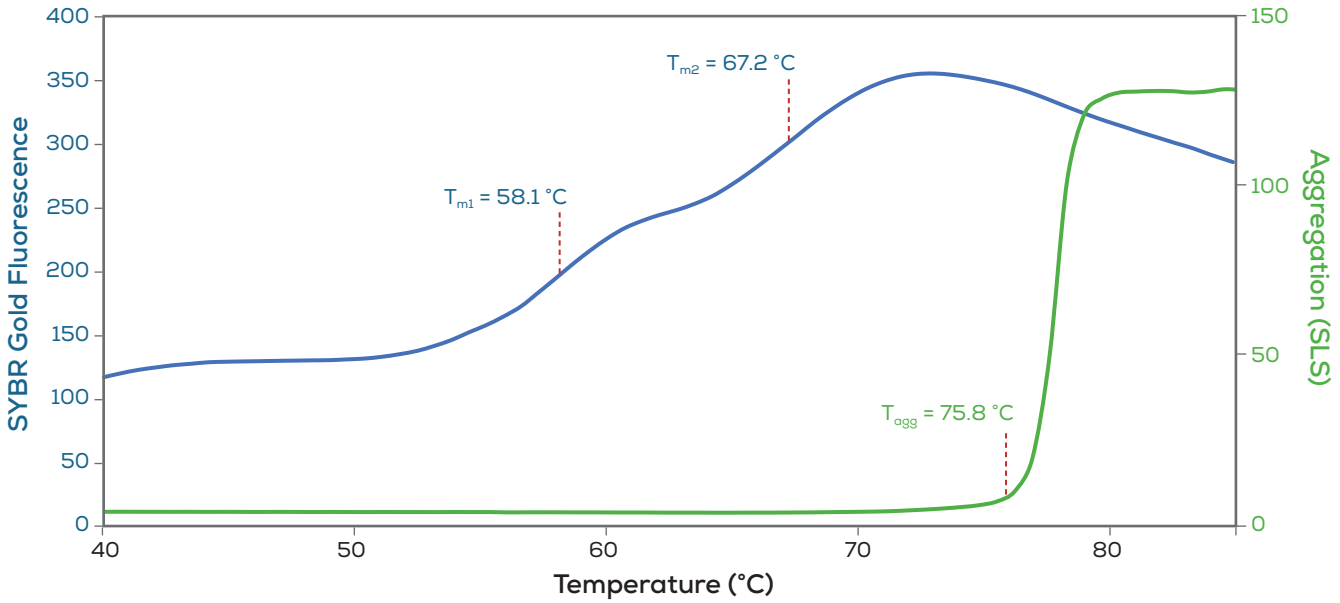
Capsid stability

Genome ejection

Aggregation

See when capsids leak & pop

Uncle pairs up full spectrum fluorescence and SLS to get a unique picture of AAV genome ejection and aggregation – all in one experiment with just 9 µL per sample. Run up to 48 samples at once to see how different serotypes, buffers and pH shake things up when it comes to stability. Use total fluorescence to quantify initial free DNA at the start of your run, and the amount that's on the loose after a thermal ramp.

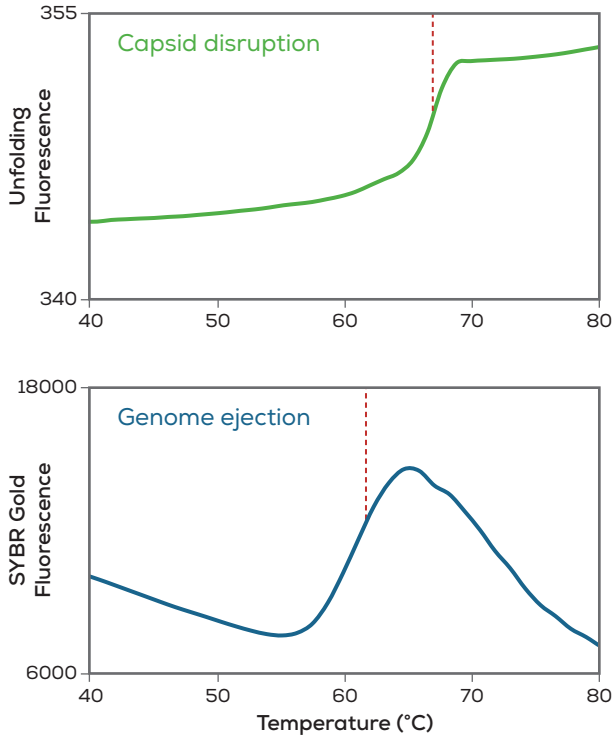


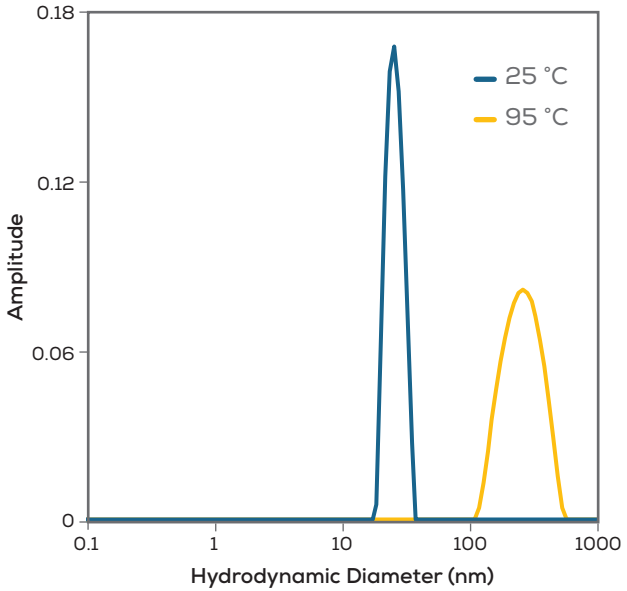
Don’t miss out

Capsid disruption and genome ejection happen independently – so measuring just one or the other won’t give you the full stability picture. Uncle dishes out both, so you never miss a beat.

Know you’re good to go

Check DLS before every run to see if you’re in the clear or if aggregation’s gotten out of hand. World-class DLS easily spots right-size capsids – from rock-bottom sample volumes and concentrations down to 5E11 cp/mL.





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Rev A