

ExoGlow™-NTA FLUORESCENT LABELING KIT

FOR MORE ACCURATE, EV-ONLY NTA QUANTITATION

SYSTEMBIO.COM/EXOGLOW-NTA

HIGHLIGHTS

- **Only commercially available kit that labels EVs for fluorescent NanoSight NTA quantitation**
- **Delivers high signal-to-noise ratio with a proprietary dye that specifically binds EVs**
- **Validated using common EV isolation methods including ExoQuick™, ultracentrifugation, and column-based methods**
- **Optimized for speed—only 45 minutes from sample isolation to analysis**
- **Also available as a service from SBI—send us your samples and we'll isolate, label, and perform fluorescent NTA on your EVs**

For fluorescent NTA analysis, the NanoSight NTA system (model LM10, NS300 or others) MUST be installed and properly calibrated with a 488 nm laser (available separately). Please contact your local Malvern Instruments representative for additional information.



System Biosciences
Harnessing innovation to drive discoveries

Detect only extracellular vesicles with NanoSight

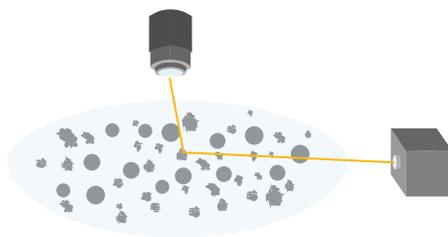
Making a great exosome research tool even better, SBI has developed ExoGlow™-NTA, a proprietary dye that enables fluorescent NanoSight™ analysis of only the extracellular vesicles (EVs) present in a heterogeneous sample. The result is more accurate EV NanoSight data that excludes protein aggregates, membrane fragments, and other background particles to provide EV-specific particle size distribution and concentration.

Gain more accurate insight into your exosome sample

The ExoGlow-NTA Kit takes advantage of the fluorescence capabilities of the NanoSight instrument with a proprietary fluorescent dye, which works by binding specifically and efficiently to the surface of intact vesicles. Membrane fragments, protein aggregates, and other background particles do not bind the ExoGlow-NTA dye, resulting in exclusion of these species from fluorescent NTA (Figure 1). Thus, with the ExoGlow-NTA Kit, the data delivered by NTA more accurately represents the EV populations in your sample rather than all particles, as is typically reported by conventional (non-fluorescent) NTA.

Conventional NTA

All particles unlabeled and equally visible to NTA



Fluorescent NTA

Only ExoGlow-NTA-labeled particles are visible to NTA

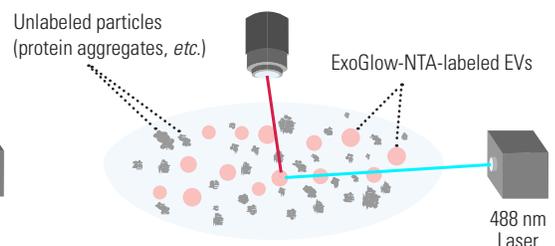


Figure 1. The ExoGlow-NTA dye only binds to membranes of intact EVs. Unlike conventional NTA, which collects data on all particles in a solution based on light scattering, the fluorescence mode of the NanoSight instrument selectively detects the labeled EVs and only the data from fluorescently-labeled particles is reported.

The ExoGlow-NTA Kit comes with three components: 1) Labeling dye 2) Internal Standards and 3) Reaction Buffer. Simply mix the dye with the reaction buffer, add 1-100 µg of EVs (or protein equivalent), incubate for 30 minutes, and you are ready for fluorescent NTA analysis. The provided Internal Standards are size-controlled synthetic liposomes that provide a positive control for NanoSight calibration as well as EV/exosome labeling efficiency using the ExoGlow-NTA Kit.

Better NanoSight NTA data on EVs using ExoGlow-NTA

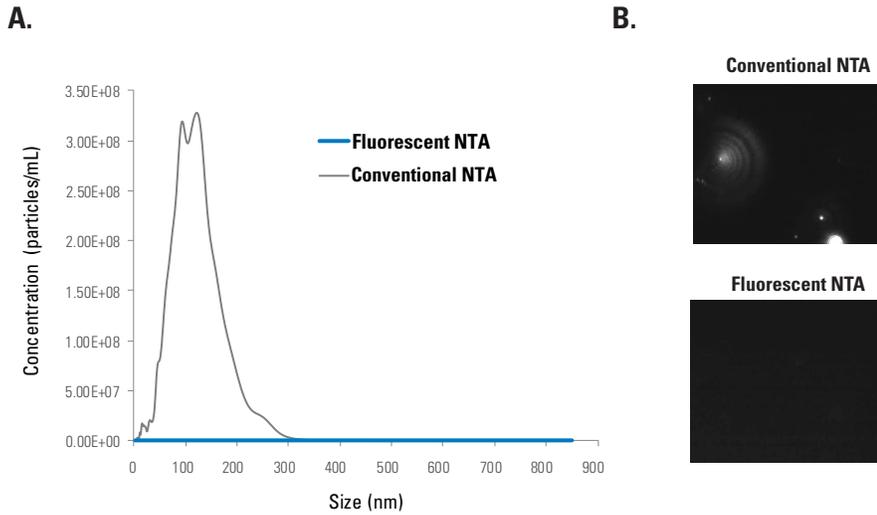


Figure 2. ExoGlow-NTA exhibits undetectable background signal. Conventional NTA and Fluorescent NTA of ExoGlow-NTA dye in the absence of EVs shows bias-free undetectable autofluorescence, based on (A) particle counts and (B) imaging.

Building the tools that speed your research

With an eye on the latest advances, SBI finds promising technology and converts it into easy-to-use tools accessible to any researcher. Our growing exosome product portfolio is just one example. See what other ways SBI can drive your research forward—visit us at systembio.com.

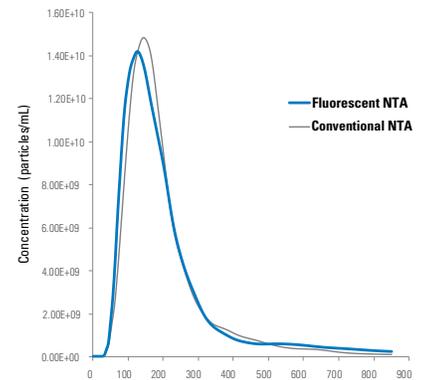
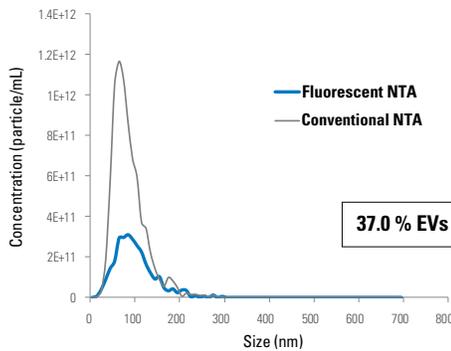
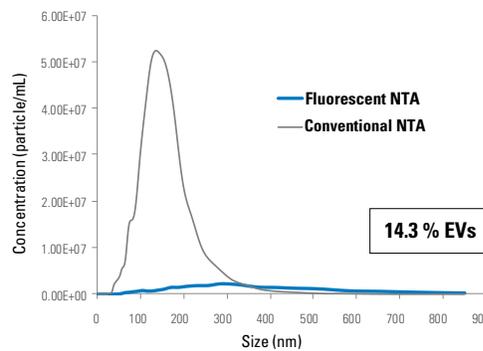


Figure 3. ExoGlow-NTA-labeled liposomes deliver consistent NanoSight NTA data whether in light scattering or fluorescent mode. The high concordance of NTA and fluorescent NTA data collected from the ExoGlow-NTA Kit internal standards (ExoGlow-NTA-labeled synthetic liposomes) demonstrates the labeling efficiency of the ExoGlow-NTA Dye and accuracy of the fluorescent NTA method for characterizing EVs.

A. ExoQuick



B. Ultracentrifugation + Wash



C. Column-based

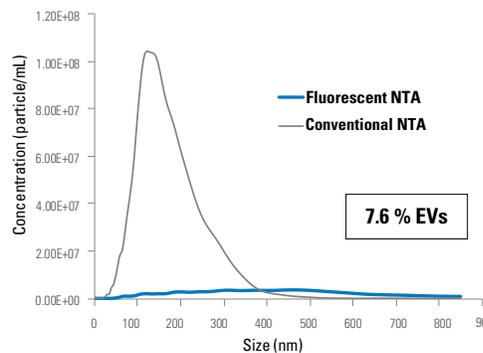


Figure 4. ExoGlow-NTA demonstrates that conventional NTA overestimates EV concentration in samples irrespective of EV isolation method. Representative data comparing conventional NTA and fluorescent NTA for EVs isolated using (A) ExoQuick (10 µg serum protein), (B) ultracentrifugation and wash (1 µg serum protein), or (C) column-based (1 µg serum protein), shows how much of the conventional NTA signal is due to non-EV particles.

Also available as a service!
Simply send us your samples and we'll send back your fluorescent NTA data—learn more by emailing services@systembio.com