EXOSOME RESEARCH

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 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 5 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, Particle Metrix's ZetaView® instrument (520 nm or 405 nm laser) must be equipped with a CMOS camera. Please contact your local Particle Metrix representative for additional information.

SBI
System Biosciences
Harnessing innovation to drive discoveries

Detect only extracellular vesicles with Nanoparticle Tracking Analysis (NTA)

Making a great exosome research tool even better, SBI has developed ExoGlow™-NTA, a proprietary dye that enables fluorescent analysis of only the extracellular vesicles (EVs) present in a heterogeneous sample. The result is more accurate EV NTA data that excludes protein aggregates, membrane fractions, 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 an NTA 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.

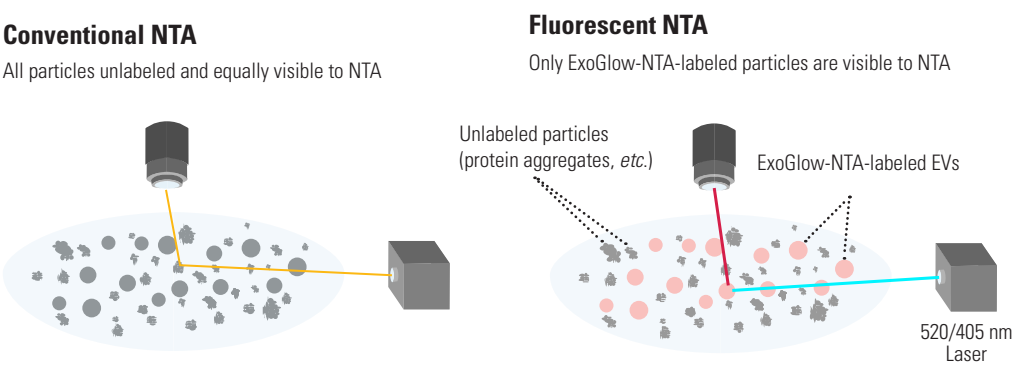

Figure 1. The ExoGlow-NTA dye only binds to membranes of intact EVs. *Unlike conventional NTA, which collects data on all particles in a solution based on light scattering, the fluorescence mode of the instrument selectively detects the labeled EVs and only the data from fluorescently-labeled particles 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 instrument calibration as well as EV/exosome labeling efficiency using the ExoGlow-NTA Kit.

Better NTA data on EVs using ExoGlow-NTA

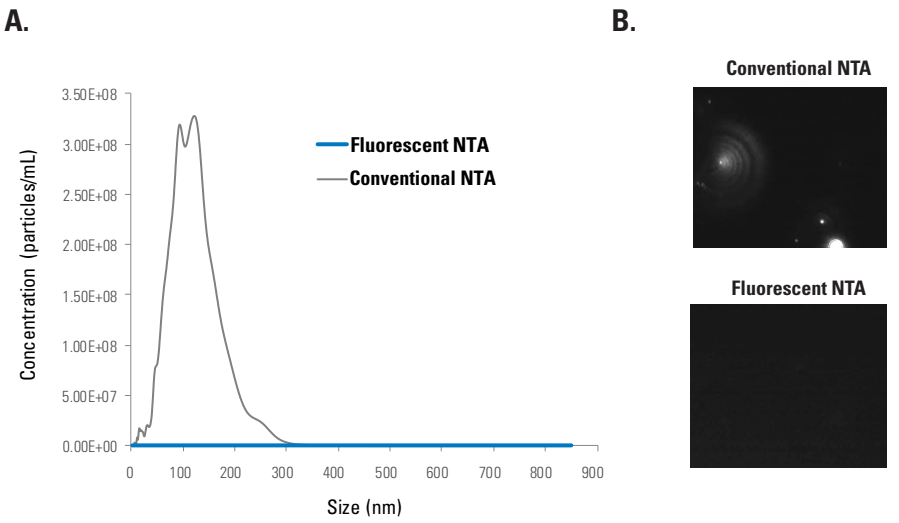

Figure 2. ExoGlow-NTA exhibits undetectable background signal. *Conventional NTA and Fluorescent NTA of ExoGlow-NTA dye in the absence of EVs shows bias-free undetectable autofluorescence, based on (A) particle counts and (B) imaging.*

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****.*

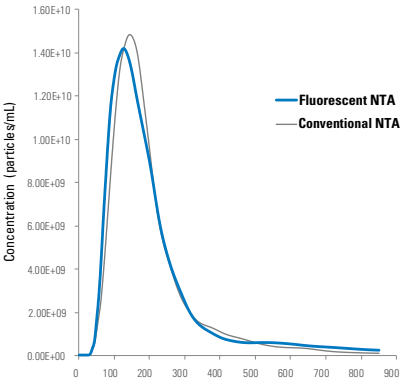

Figure 3. ExoGlow-NTA-labeled liposomes deliver consistent NTA data whether in light scattering or fluorescent mode. *The high concordance of NTA and fluorescent NTA data collected from the ExoGlow-NTA Kit internal standards (ExoGlow-NTA-labeled synthetic liposomes) demonstrates the labeling efficiency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

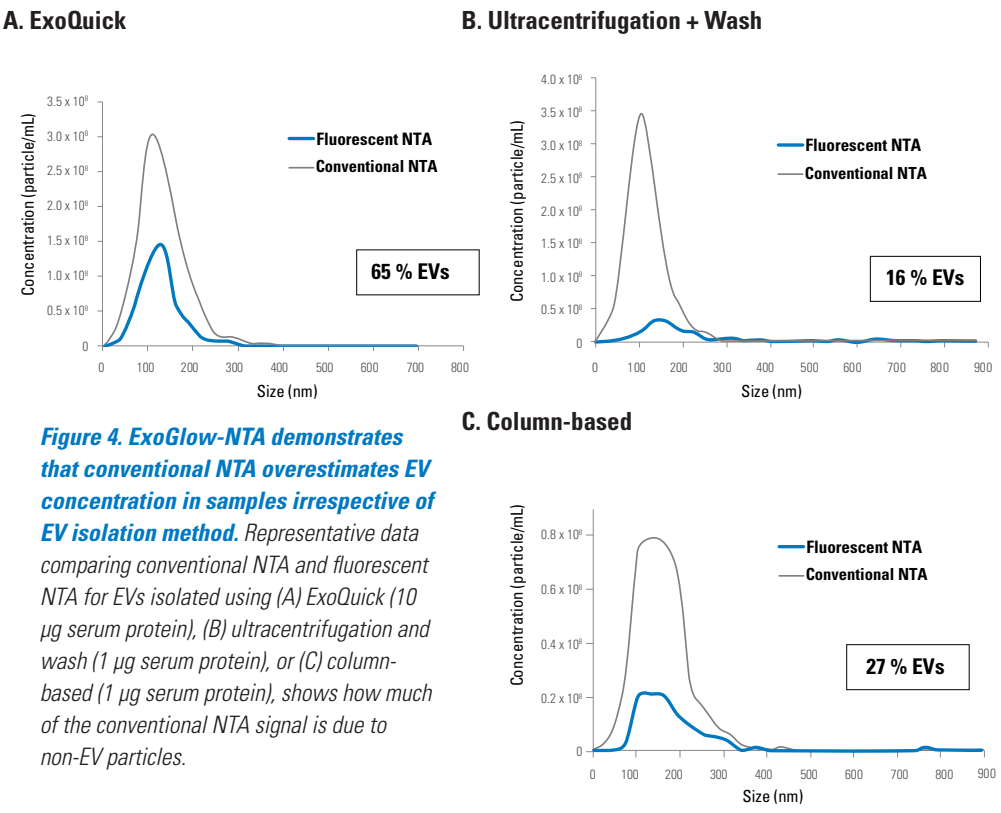

Figure 4. ExoGlow-NTA demonstrates that conventional NTA overestimates EV concentration in samples irrespective of EV isolation method. *Representative data comparing conventional NTA and fluorescent NTA for EVs isolated using (A) ExoQuick (10 µg serum protein), (B) ultracentrifugation and wash (1 µg 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***

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