Alexa Fluor® 647 FluoroNanogold™

Our New Probe for Correlative Superresolution Fluorescence & EM

New Product Feature: October 2016
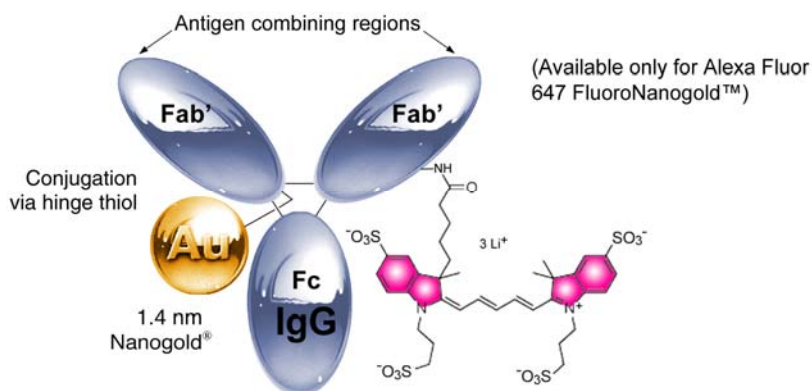
Announcing: Alexa Fluor 647® FluoroNanogold™

We are excited to introduce a new FluoroNanogold™ product line: Alexa Fluor® 647 FluoroNanogold™ Antibody and Streptavidin Conjugates. Alexa Fluor 647® FluoroNanogold™ contains an antibody or streptavidin covalently linked to both the Alexa Fluor® 647 fluorophore, and the 1.4 nm Nanogold® gold nanoparticle. The dual labels allow users to image the same exact biological structure by both fluorescence microscopy and electron microscopy, or by brightfield light microscopy using gold or silver enhancement. Our new Alexa Fluor® 647 FluoroNanogold™ probes also enable correlative superresolution fluorescence and electron microscopy. Electron microscopists can use the Alexa Fluor® 647 fluorescence to check labeling by fluorescence microscopy before EM processing.

Features and Advantages

- **Superresolution fluorescence**: Alexa Fluor® 647 is a bright, far-red fluorophore with excitation matching the 594 nm or 633 nm laser lines. Its high fluorescence intensity allows detection of low-abundance biological targets with great sensitivity. It is ideally suited to stochastic optical reconstruction microscopy (STORM) where it is an exceptional reporter for both dSTORM and nSTORM; it can also be used in two-photon excitation (TPE) microscopy

- **Brighter fluorescence:** conjugates prepared with whole IgG accommodate more fluorophores than Fab' conjugates. Plus: longer wavelength means less fluorescence quenching because spectral overlap with Nanogold® is less than with shorter wavelength fluorophores.

- **Choice of probe sizes**: pick whole IgG conjugates for brighter fluorescence, or choose Fab' fragments – just one-third the size of IgG - for higher penetration and more quantitative labeling.

- **Correlate superresolution fluorescence microscopy with EM**: Alexa Fluor® 647 is an efficient fluorophore for superresolution methods. Correlate high-resolution fluorescent labeling of organelles with macromolecular localization at the EM level.

- **Easy, efficient silver or gold enhancement**: enlarge the 1.4 nm Nanogold® label to any size from 1.4 nm to 50 nm or larger using silver enhancement or gold enhancement, our proprietary process for using gold deposition to amplify the signal from gold nanoparticles.
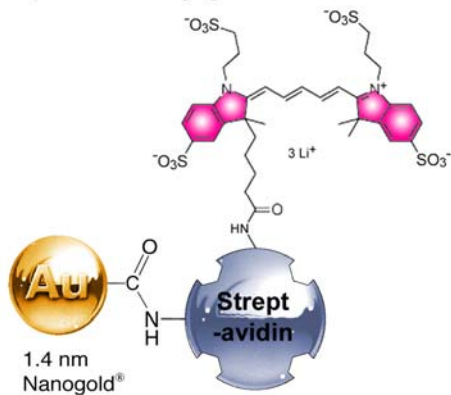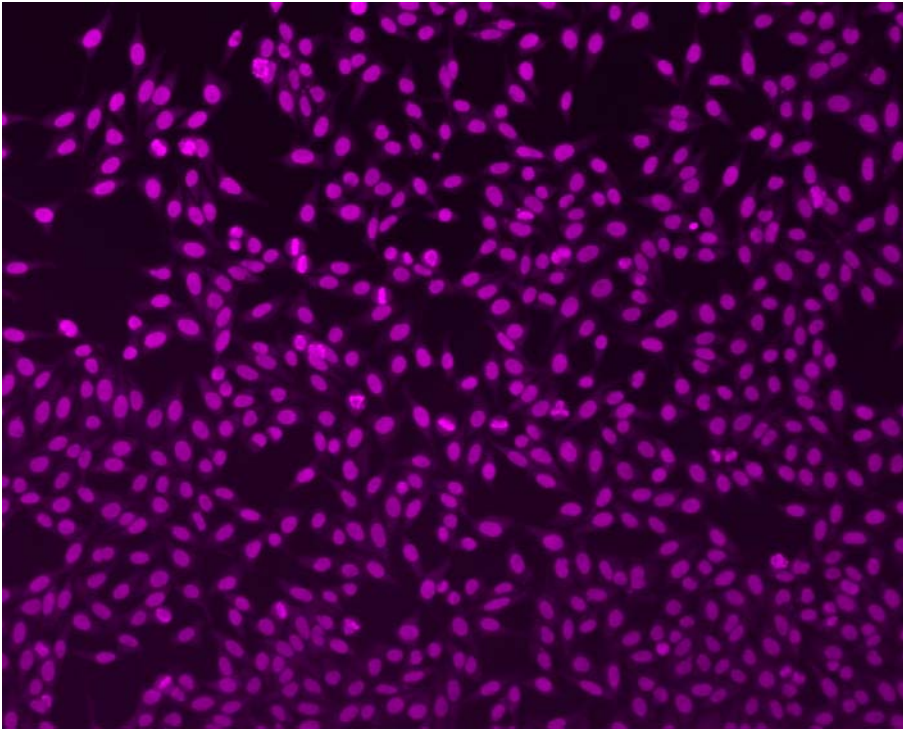
Fluorescent staining with Alexa Fluor® 647 FluoroNanogold™

Fluorescent staining of HEp-2 cell nuclei using human sera, mouse anti human IgG and Alexa Fluor® 647 FluoroNanogold™ goat anti-mouse Fab' tertiary probe.

Product line-up

Nanoprobes offers Alexa Fluor® 647 - FluoroNanogold™ conjugates of whole IgG, Fab' fragments and streptavidin. The whole IgG conjugates provide superior fluorescent intensity and low non-specific staining, while Fab' fragment conjugates allow better penetration and prevent interactions with Fc receptor-bearing membranes, since the Fc fragment is absent in Fab' fragments. Unit size: 0.5 or 1.0 mL.

Catalog No.	Product Name	Catalog No.	Product Name
7501	Alexa Fluor® 647 - FluoroNanogold™ Goat anti Mouse **IgG** (H+L)	7507	Alexa Fluor® 647 - FluoroNanogold™ Goat anti Rat **IgG** (H+L)
7502	Alexa Fluor® 647 - FluoroNanogold™ **Fab'** fragment of Goat anti Mouse IgG (H+L)	7508	Alexa Fluor® 647 - FluoroNanogold™ Fab' fragment of Goat anti Rat **IgG** (H+L)
7503	Alexa Fluor® 647 - FluoroNanogold™ Goat anti Rabbit **IgG** (H+L)	7516	Alexa Fluor® 647 - FluoroNanogold™ **Streptavidin**
7504	Alexa Fluor® 647 - FluoroNanogold™ **Fab'** fragment of Goat anti Rabbit IgG (H+L)	7552	Alexa Fluor® 647 - FluoroNanogold™ Goat anti Human **IgG** (H+L)
7505	Alexa Fluor® 647 - FluoroNanogold™ Rabbit anti Goat **IgG** (H+L)	7554	Alexa Fluor® 647 - FluoroNanogold™ Goat anti Guinea Pig **IgG** (H+L)
7506	Alexa Fluor® 647 - FluoroNanogold™ **Fab'** fragment of Rabbit anti Goat IgG (H+L)		

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