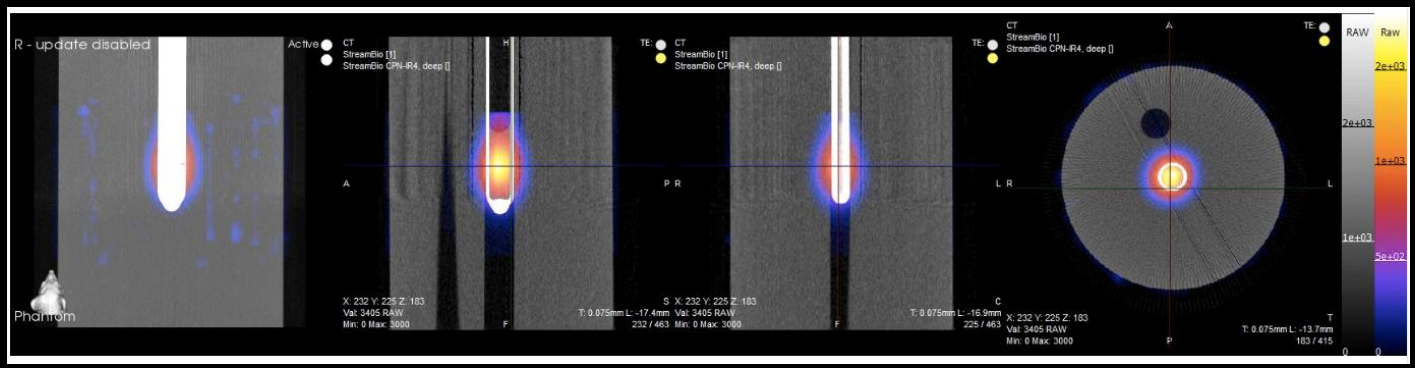
Infrared CPNs

Near Infrared (NIR) Emitters and Molecular Probes

Conjugated Polymer Nanoparticles (CPNs™) are exceptionally bright, sensitive and stable molecular imaging and detection probes with wavelengths that span the visible and near infrared spectrum, easily linked to antibodies, oligos, and other targeting molecules. Cellular and biological imaging in the near infrared region is of particular importance as blood and skin appear transparent in these spectral regions, in three distinct windows: Near infrared (NIR) 1 (700 nm to 950 nm), NIR 2 (1000 nm -1330 nm) and NIR 3 (1550 nm to 1870 nm), potentially allowing for deep tissue imaging in biological tissues.

CPN770 (10pM) signal in mouse phantom imaged using InSyTe FLECT/CT



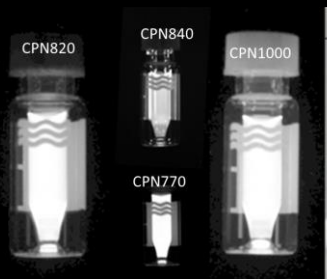
Superior signals when linked to matching amounts of antibodies:

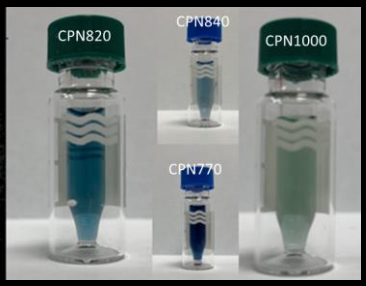
- Fluorescence resistant to photobleaching, ensuring signal remains stable for reliable detection.
- Signal is directly proportional with a linear relationship to the target concentration, allowing reliable quantification.
- Indocyanine green (ICG) is a clinical NIR-I imaging reagent with drawbacks in stability, the compound is relatively stable as a solid, yet rapidly decomposes in water at room temperature.
- IR CPNs possess many properties that could ultimately benefit and significantly advance in-vivo imaging and overcome the limitations of Indocyanine green (ICG).
- Wide range of CPN™ colours in addition to NIR allowing compatibility with a range of systems.
- Quick and easy linkage to antibodies and oligos with our new **LINKBRIGHT™ conjugation kits**

Rapid conjugation with LINK**BRIGHT™** kits

CPN™ – CONJUGATED POLYMER NANOPARTICLES

With immensely bright emission properties and highly specific targeting capabilities, our non-toxic CPN™ molecular probes have many advantages over traditional dyes in a variety of R&D applications, including in vitro imaging and labelling, diagnostics and therapeutics.





	Ex / Em
CPN 680 (Red)	400 / 680
CPN 770 (IR-I)	610 / 770
CPN 820 (IR-I)	640 / 820
CPN 840 (IR-I)	630 / 840
CPN 1000 (IR-II)	750 /1000

Contact us for more information: info@streambio.co.uk