



CPNs™	Ex/Em maxima (nm)	Fluorescent colour	Spectrally comparable* fluorophores	Commonly used filter sets (Ex/Em)
CPN™ 1000	750 / 1000	IR-II		
CPN™ 840	630 / 840	IR-I		
CPN™ 830	610 / 830	IR-I		
CPN™ 820	640 / 820	IR-I		
CPN™ 770	610 / 770	IR-I		
CPN™ 680	400 / 680	Red		
CPN™ 660	540 / 660	Red		
CPN™ 610	480 / 610	Orange		
CPN™ 580	488 / 580	Orange		
CPN™ 550	470 / 550	Yellow	FITC, Alexa Fluor® 488, GFP, YFP	475/70 BP 530/86 BP
CPN™ 530	455 / 530	Green		
CPN™ 510	400 / 510	Green		
CPN™ 510	455 / 510	Green	FITC, Alexa Fluor®488, Dylight 488,GFP, YFP	475/70 BP 530/86 BP
CPN™ 475	390 / 475	Blue	AMCA, eBFP, DAPI, Hoechst 33342, Hoechst 33258	377/60 BP 447/60 BP
CPN™ 435	390 / 435	Indigo	AMCA, eBFP, DAPI, Hoechst 33342, Hoechst 33258, Alexa Fluor® 405	377/60 BP 447/60 BP
CPN™ 420	390 / 420	Violet	AMCA, eBFP, DAPI, Hoechst 33342, Hoechst 33258, Alexa Fluor® 405	377/60 BP 447/60 BP

## LINKBRIGHT™

### CPN: Thiol Oligonucleotide Conjugation Kit

### Manual and protocol

60min reaction time, 7 easy steps

This product is for research use only and is not intended for diagnostic use.

#### LINKBRIGHT™ Conjugation Kits

are available for IgG antibody, oligonucleotide and protein linkage via Amine & Thiol in the above CPN wavelengths.

#### Purchaser Notification

These high-quality reagents and materials must be used by, or directly under the supervision of, a technically qualified individual experienced in handling potentially hazardous chemicals. Read the Safety Data Sheet for each product available, other regulatory considerations may apply.

#### Obtaining Support

Search FAQ's at [www.streambio.co.uk/FAQs](http://www.streambio.co.uk/FAQs) or submit a question directly to Technical Support [techsupport@streambio.co.uk](mailto:techsupport@streambio.co.uk)

#### SDS

Safety Data Sheets (SDSs) are available at [www.streambio.co.uk/resources-downloads/](http://www.streambio.co.uk/resources-downloads/)

#### Certificate of Analysis

The Certificate of Analysis provides detailed quality control and product qualification information for each product. Certificates of Analysis are available on request

#### For Research Use Only. Not for use in diagnostic procedures.

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## Materials supplied and storage

Vial / cap colour	Item (colour coded)	Quantity		Storage
1. Grey*	(150µl) LINKBRIGHT™-Thiol	1 vial	3 vials	-20°C
2. Pink	Solution HT	1 vial	1 vial	-20°C
3. Orange	Solution SC	1 vial	1 vial	-20°C

When stored as directed, the kit components are stable for at least 6 months.  
1x vial of CPN LINKBRIGHT™ (150µl) is optimised for ~6 nmole of oligonucleotides.

\*CPNs™ are available in a range of emission wavelengths (420 nm to 1000 nm in the IR see table or visit [www.streambio.co.uk/products/](http://www.streambio.co.uk/products/)

### Procedure Overview

(Hands-on) – Reduce thiol oligonucleotides

Reaction time 30 min

(Hands-on) - Add oligonucleotides to a vial of LINKBRIGHT™

Reaction time 30 min

Stop reaction

(Hands-on) - Add Solution SC for 5 min

## Before you Start

**IMPORTANT:** The purified oligonucleotide must be in a buffer free of ammonium ions, primary amines, or sodium azide preservatives, as they will disrupt the linkage reaction with the CPNs™. If the oligonucleotide is in, or has been lyophilized from an unsuitable buffer (e.g. Tris or glycine) or purified with ammonium sulphate, the buffer needs to be replaced with HEPES. Oligonucleotides can be purified and resuspended using standard methods, e.g. microdialysis or column separation.

## Biomolecule Conjugation Procedure

*Note:* LINKBRIGHT™ Thiol Oligo Conjugation Kit is optimised for conjugation of oligonucleotides to the thiol group, for other biomolecules please either use an alternative kit, consult our guide, or contact technical support. LINKBRIGHT™ IgG antibody Conjugation Kits are also available

## CPN Conjugation

1. Dissolve the lyophilized thiol-modified oligonucleotides in ddH<sub>2</sub>O to the final concentration at 100 µM.
2. Take 60 µl of 100 µM thiol-modified oligonucleotide and add 60 µl of Solution HT (vial #2, pink cap)
3. Incubate at room temperature for 30 min
4. Add 150 µl of oligonucleotide<sup>§</sup> mixture to a vial of LINKBRIGHT™ CPN - Thiol
5. Incubate at room temperature for 30 min
6. Add 6µl Solution SC (vial #3, orange cap)
7. Incubate at room temperature for 5 min

(Optional) A magnetic separation<sup>‡</sup> method or a 100kD MWCO desalting column can be chosen to purify the conjugates when required

<sup>§</sup>Optimal antibody to CPN ratio to be determined by end user.

<sup>‡</sup>CPNs™ can be attracted to magnets allowing the purifying and separating of the CPNs™ from unlinked reagents.