

## Cholera Toxin Subunit B CF® Dye Conjugates

Fluorescent conjugates of recombinant cholera toxin subunit B. Can be used for tract-tracing in neurological research, targeting GM1 ganglioside binding and retrograde transport.



### Product attributes

Probe cellular localization	Membrane/cell surface
For live or fixed cells	For fixed cells, For live/intact cells
Assay type/options	Real-time imaging
Detection method/readout	Fluorescence microscopy, Flow cytometry
Cell permeability	Membrane impermeant
Fixation options	Fix before staining (formaldehyde), Fix after staining (formaldehyde)
Toxin	Cholera toxin
Colors	Blue, Green, Orange, Red, Far-red, Near-infrared

### Product Description

Fluorescent labeled cholera toxin subunit B (CTB) can be used for tract-tracing in neurological research, targeting GM1 ganglioside binding and retrograde transport. This product is made from purified recombinant CTB and is completely free of the toxic A subunit.

- Choice of 12 bright & photostable CF® Dyes from green to near-infrared
- Fluorescent lipid raft markers and retrograde neuronal tracers for live imaging or on fixed cells

Cholera toxin is the symptom-causing toxin produced by the bacteria *Vibrio cholerae* during cholera infection. The toxin is composed of two subunits, A and B. Subunit A is the toxic enzymatic subunit present in one copy per toxin. CTB is the receptor binding subunit that is found as a pentamer in each toxin and is relatively non-toxic, making it useful for cell biological studies. CTB has been used as a neuronal tracer and has also been shown to bind to GM1 gangliosides that are found in lipid rafts on the surface of mammalian cells. Therefore, fluorescently labeled conjugates of CTB have been used as lipid raft markers and endocytic tracers for live imaging or on fixed cells.

### Superior CF® Dyes

Biotium's next-generation CF® Dyes were designed to be highly water-soluble with advantages in brightness and photostability compared to other commercially available dyes. Learn more about [CF® Dyes](#).

**Note:** Conjugates of blue-fluorescent dyes like CF®350, CF®405S and CF®405M are not recommended for detecting low abundance targets and may be challenging to use in tissue specimens. Blue dyes have lower fluorescence and photostability, and cells and tissue have high autofluorescence in blue wavelengths, resulting in lower signal to noise compared to other colors.

### CF® Dye Cholera Toxin Conjugates

Conjugation	Ex/Em	Size	Catalog No.	Dye Features
<a href="#">CF®405M</a>	408/452 nm	100 ug	<a href="#">00068</a>	<a href="#">CF®405M Features</a>
<a href="#">CF®488A</a>	490/515 nm	100 ug	<a href="#">00070</a>	<a href="#">CF®488A Features</a>
<a href="#">CF®532</a>	527/558 nm	100 ug	<a href="#">00074</a>	<a href="#">CF®532 Features</a>
<a href="#">CF®543</a>	541/560 nm	100 ug	<a href="#">00075</a>	<a href="#">CF®543 Features</a>
<a href="#">CF®568</a>	562/583 nm	100 ug	<a href="#">00071</a>	<a href="#">CF®568 Features</a>
<a href="#">CF®594</a>	593/614 nm	100 ug	<a href="#">00072</a>	<a href="#">CF®594 Features</a>
<a href="#">CF®633</a>	630/650 nm	100 ug	<a href="#">00077</a>	<a href="#">CF®633 Features</a>
<a href="#">CF®640R</a>	642/662 nm	100 ug	<a href="#">00073</a>	<a href="#">CF®640R Features</a>
<a href="#">CF®647</a>	650/665 nm	100 ug	<a href="#">00069</a>	<a href="#">CF®647 Features</a>
<a href="#">CF®660R</a>	663/682 nm	100 ug	<a href="#">00078</a>	<a href="#">CF®660R Features</a>
<a href="#">CF®680R</a>	680/701 nm	100 ug	<a href="#">00079</a>	<a href="#">CF®680R Features</a>
<a href="#">CF®740</a>	742/767 nm	100 ug	<a href="#">29127</a>	

CF is a registered trademark of Biotium, Inc.

### References

#### CF®568 Cholera Toxin (00071)

Nature (2016) 529, 408–412. <https://doi.org/10.1038/nature16516>

Nature (2017) 546, 492–497. <https://doi.org/10.1038/nature22818>

Download a list of [CF® dye references](#).

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