

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 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 13 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.

Conjugation	Ex/Em	Size	Catalog No.	Dye Features
CF®405M	408/452 nm	100 ug	00068	CF®405M Features
CF®488A	490/515 nm	100 ug	00070	CF®488A Features
CF®532	527/558 nm	100 ug	00074	CF®532 Features
CF®543	541/560 nm	100 ug	00075	CF®543 Features
CF®568	562/583 nm	100 ug	00071	CF®568 Features
CF®594	593/614 nm	100 ug	00072	CF®594 Features
CF®633	630/650 nm	100 ug	00077	CF®633 Features
CF®640R	642/662 nm	100 ug	00073	CF®640R Features
CF®647	650/665 nm	100 ug	00069	CF®647 Features
CF®660R	663/682 nm	100 ug	00078	CF®660R Features
CF®680R	680/701 nm	100 ug	00079	CF®680R Features
CF®740	742/767 nm	100 ug	29127	CF®740 Features
CF®790	783/808 nm	100 ug	00065	CF®790 Features

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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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