Product Information

α-Bungarotoxin Conjugates

Catalog no.	Conjugate	Unit size	Ex/Em (nm)
00002-100ug	CF®405S	100 ug	411/431
00002		0.5 mg	
00005-100ug	CF®488A	100 ug	490/516
00005		0.5 mg	
00026-100ug	CF®543	100 ug	543/563
00026		0.5 mg	
00018-100ug	CF®555	100 ug	554/568
00018		0.5 mg	
00006-100ug	CF®568	100 ug	551/574
00006		0.5 mg	
00007-100ug	CF®594	100 ug	593/615
00007		0.5 mg	
00009-100ug	CF®633	100 ug	629/650
00009		0.5 mg	
00004-100ug	CF®640R	100 ug	642/663
00004		0.5 mg	
00003-100ug	CF®680R	100 ug	680/701
00003		0.5 mg	
00011	Fluorescein (FITC)	0.5 mg	498/517
00013		10 x 50 ug	
00012	Tetramethylrhodamine (TRITC)	0.5 mg	552/578
00014		10 x 50 ug	
00015	Sulforhodamine- 101 (Texas Red®)	0.5 mg	595/613
00016		10 x 50 ug	
00017	Biotin-XX	0.5 mg	N/A
00010	Unconjugated	1 mg	N/A

Storage and Handling
Store at -20°C and protect from light, especially when in solution. Product is stable for at least 1 year from date of receipt when stored as recommended.

Stock solutions can be prepared in PBS at 0.5 mg/mL and stored at 4°C for at least 6 months, or in single use aliquots at -20°C for longer term storage. Avoid multiple freeze-thaw cycles.

Color and Form: Lyophilized solid or powder, color varies with conjugate.
Solubility: Soluble in water or aqueous buffer.

Spectral Properties
See product table above for absorption/emission maxima.
Please visit our **spectra viewer** to view individual dye spectra.

Product Description
α-Bungarotoxin is a potent polypeptide neurotoxin from the venom of certain snake species that is an inhibitor of the motor endplate acetylcholine receptors found at the neuromuscular junction. Fluorescent conjugates of α-bungarotoxin can be used for imaging of nicotinic acetylcholine receptors (AChRs).

α-Bungarotoxin may also be used for detection of GABAA receptor subsets in cells (1), or for labeling recombinant proteins that express the α-bungarotoxin binding site (BBS) epitope tag (2). Biotium's CF® Dyes are superior fluorescent dyes with exceptional brightness and remarkable photostability. We also offer conjugates of the traditional fluorescent dyes FITC, TRITC, and Texas Red®.

Botinylated α-bungarotoxin is useful in the affinity column isolation of nicotinic AChRs using an avidin or streptavidin matrix. Nicotinic AChRs labeled with biotin-XX-α-bungarotoxin can also be localized using enzyme- or fluorophore-labeled conjugates of avidin or streptavidin.

Biotium also offers unconjugated α-bungarotoxin which may be used to block cholinergic receptors to study neuromuscular junctions.

Note: Biotium's α-bungarotoxin comprises two polypeptide species of similar size (MW: ~8,000 Dalton), both of which bind to nicotinic acetylcholine receptors at the neuromuscular junction at equally high affinity and selectivity. The reason for the presence of two polypeptides is not clear, but may be related to the snake species from which the toxin is isolated.

References
1) PNAS 103(13), 5149-5154 (2006); 2) Methods Enzymol 521, 109-129 (2013).

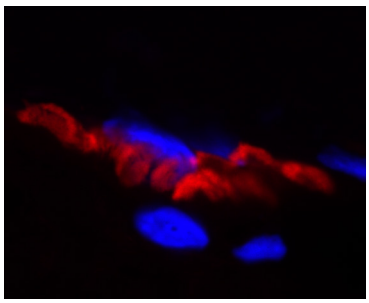

Figure 1. Frozen section of rat skeletal muscle stained with CF®594 α-Bungarotoxin (red). Mounted in EverBrite™ Mounting Medium with DAPI (nuclei, blue).

Staining Protocol
The following is an example protocol for staining 10 um-thick fresh-frozen cryosections of rat skeletal muscle with fluorescent α-bungarotoxin conjugates, and may require optimization for other applications. α-Bungarotoxin conjugate staining can be performed concurrently with immunofluorescence staining.

1. Fix freshly frozen sections in 4% paraformaldehyde in PBS for 15 minutes at room temperature. Alternatively, sections can be fixed in ice-cold methanol for 5 minutes at -20°C. Rinse 3X with PBS.
2. Permeabilize sections with PBS/0.1% Triton® X-100 for 10 minutes at room temperature. Permeabilization is not required for methanol-fixed sections.
3. Prepare staining solution of 1 ug/mL α-bungarotoxin in PBS. The conjugate can also be diluted in an immunofluorescence blocking buffer.
4. Overlay sections with enough staining solution to completely cover the tissue. A square of Parafilm® can be placed on top of the staining solution to evenly spread the solution over the section.
5. Incubate in a dark, humid chamber for at least 15 minutes at room temperature.
6. Rinse several times in PBS.
7. Mount in fluorescence antifade mounting medium and coverslip.

Related Products

Catalog number	Product
22023	Paraformaldehyde, 4% in PBS Ready-to-Use Fixative
22030	AntiFix™ Universal Antigen Retrieval Buffer, 10X
23001	EverBrite™ Mounting Medium
23002	EverBrite™ Mounting Medium with DAPI
23003	EverBrite™ Hardset Mounting Medium
23004	EverBrite™ Hardset Mounting Medium with DAPI
23008	Drop-n-Stain EverBrite™ Mounting Medium
23009	Drop-n-Stain EverBrite™ Mounting Medium with DAPI
23005	CoverGrip™ Coverslip Sealant
22005	Mini Super^{HT} Pap Pen 2.5 mm tip, ~400 uses
22006	Super^{HT} Pap Pen 4 mm tip, ~800 uses
40061-T	RedDot™2 Far Red Nuclear Counterstain, 200X in DMSO
23012	TrueBlack® IF Background Suppressor System (Permeabilizing)
22010	10% Fish Gelatin Blocking Buffer
22014	30% Bovine Serum Albumin Solution
22002	Tween®-20

Please visit **www.biotium.com** to view our full selection of products featuring bright and photostable fluorescent CF® Dyes, including secondary antibodies, phalloidins and other conjugates, Mix-n-Stain™ antibody labeling kits, and many more innovative fluorescent dyes and assays for life science research.