Cy5-Alpha-Bungarotoxin

Cat #: BGT-CHM-402

Size: 100 µg

Storage: Store at -20°C protected from light.

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, or for labeling recombinant proteins that express the α-bungarotoxin binding site (BBS) epitope tag.

Note: 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.

Product Properties

Form: Powder

Spectral properties: Ex / Em = 649 / 667 nm

Solubility: Soluble in water or aqueous buffer

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

Staining Protocol

The following is an example protocol for staining 10um-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.

Note:

The product listed herein is for research use only and is not intended for use in human or clinical diagnosis.