Datasheet for ABIN7491790

BDNF Protein (Biotin)

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Overview

Quantity:	5 µg
Target:	BDNF
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This BDNF protein is labelled with Biotin.
Application:	Western Blotting (WB), Immunofluorescence (IF), Live Cell Imaging (LCI), Fluorescence Microscopy (FM)

Product Details

Purpose:	Biotin Labeled human BDNF for Qdot Labeling
Sequence:	HSDPARRGEL SVCDSISEWV TAADKKTAVD MSGGTVTVLE KVPVSKGQLK QYFYETKCNP MGYTKEGCRG IDKRHWNSQC RTTQSYVRAL TMDSKKRIGW RFIRIDTSCV CTLTIKRGR-OH
Specificity:	Toxin target: p75NTR, TrkB receptors, LC-Biotin
Characteristics:	Biotin Labeled human BDNF for Qdot Labeling
Purity:	>98 %

Target Details

Target:	BDNF
Alternative Name:	BDNF (BDNF Products)

Target Details

Background:	Brain-Derived Neurotrophic Factor,Few examples in the literature emphasize the importance of using BDNF-biotin in living cells experiments. Pardridge, W.M et al. demonstrated that the delivery of BDNF to the brain is non-existent owing to the combined effects of neglible blood brain barrier (BBB) transport and rapid systemic clearance1. The brain delivery of BDNF may be increased by conjugating biotinylated BDNF to BBB drug delivery vectors, such as neutral avidin conjugated to murine monoclonal antibody to the rat transferrin receptor1. Zhang, Y. and Pardridge, W.M further showed that when BDNF is formulated to enable transport across the BBB, the intravenous administration of BDNF results in the reduction in stroke volume and improvement in functional outcome2.Du, J. et al. detected by using BDNF-biotin the ligand-induced TrkB internalization in cultured hippocampal neurons3.Bhattacharyya, A. et al. showed in mature sciatic nerves, that biotinylated BDNF activated Trk receptors function as rapid retrograde signal carriers to execute remote responses to target-derived neurotrophins4.Song, X.Y. et al. proved that exogenous BDNF-biotin is transported by the peripheral nerves following injection into the rat footpad and can be found in the sciatic nerves in fibres and vesicles5. Their data suggest that peripherally applied BDNF may have therapeutic effects on injured spinal cord. Xie, W. et al. followed the trafficking of QD-BDNF (Quantum Dot-BDNF) after its internalization at the axon terminal6. Their result showed that QD-BDNF could be used to track the movement of exogenous BDNF in neurons over long distances and to study the signaling organelles that contain BDNF6.
Molecular Weight:	~28 kDa (dimer)
Gene ID:	4915
Pathways:	RTK Signaling, Synaptic Membrane, Feeding Behaviour, Dicarboxylic Acid Transport, Regulation of long-term Neuronal Synaptic Plasticity

Application Details

Application Notes:	Antigen Preadsorption Control: ED50 = 220 pM
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Centrifuge the vial (10,000 x g for 5 minutes) before adding solvent to spin down all the powder to the bottom of the vial. The lyophilized product may be difficult to visualize. Add solvent directly to the centrifuged vial. Gently tap, tilt, and roll the vial to aid dissolution. Avoid vigorous

Handling

	vortexing, light vortexing for up to 3 seconds is acceptable if needed. The product is soluble in pure water at high micromolar concentrations (5 µM - 1 mM). For long-term storage in solution, we recommend preparing a stock solution by dissolving the product in sterile water at a concentration between 100-1000x of the final working concentration. Divide the stock solution into small aliquots and store at -20 °C. Before use, thaw the relevant vial(s) and dilute to the desired working concentration in your working buffer. Centrifuge all product preparations before use. It is recommended to prepare fresh solutions in working buffers just before use. Avoid multiple freeze-thaw cycles to maintain biological activity.
Buffer:	Lyophilized from double distilled water (ddH2O). May contain TFA as a residual counter ion.
Storage:	-20 °C
Storage Comment:	Store the reconstituted solution at -20°C for the shortest time possible. Avoid multiple freeze-thaw cycles. We do not recommend storing the product in working solutions for longer than a day.,Store the reconstituted solution for the shortest time possible at -20°C. We do not recommend storing the product in working solution for longer than one day. Avoid multiple freeze-thaw cycles.