Human NT-4 Alexa Fluor® 350-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 36507

Catalog Number: FAB2681U

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NT-4 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) BDNF or rhNT-3 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 36507
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human NT-4 Gly81-Ala210 (predicted) Accession # P34130
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Neurotrophin-4 (NT-4), also known as NT-5, is a member of the NGF family of neuronal and epithelial growth factors. Neurotrophins have six conserved cysteine residues that are involved in the formation of three disulfide bonds (1-3). The human NT-4 cDNA encodes a 210 amino acid (aa) precursor that includes a 24 aa signal sequence, a 56 aa propeptide, and a 130 aa mature protein (4, 5). NT-4 is synthesized as a 28 kDa prepropeptide that is proteolytically processed to generate the mature protein. Mature human NT-4 shares 48-52% aa sequence identity with human beta-NGF, BDNF, and NT-3. It shares 91% and 95% aa sequence identity with mouse and rat NT-4/5, respectively. The mature protein is secreted as a homodimer and can also form heterodimers with BDNF or NT-3 (6). NT-4 binds and induces receptor dimerization and activation of TrkB (4, 7). NT-4 promotes the development and survival of selected peripheral and CNS neurons (8-10). BDNF, which also activates TrkB, overlaps with many but not all NT-4 functions, a distinction that is likely due to differences in expression patterns (8-10). NT-4 induced TrkB signaling augments NMDA receptor activity and increases neuronal sensitivity to excitotoxic cell death (11). It also promotes the proliferation of keratinocytes and accelerates hair follicle regression during the follicular cycle (12, 13). NT-4 is secreted by activated T cells and granulocytes at sites of inflammation where it contributes to tissue regeneration (14-16).

PRODUCT SPECIFIC NOTICES

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