Datasheet for ABIN7043557

anti-Pro BDNF antibody (AA 72-88)

2 Images

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Overview

Quantity:	25 µL
Target:	Pro BDNF (proBDNF)
Binding Specificity:	AA 72-88
Reactivity:	Human
Host:	Guinea Pig
Clonality:	Polyclonal
Conjugate:	This Pro BDNF antibody is un-conjugated
Application:	Immunohistochemistry (IHC), Western Blotting (WB), Immunofluorescence (IF)

Product Details

Purpose:	A Guinea Pig Polyclonal Antibody to proBDNF
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)DEDQKVRPNEENNKDAD, corresponding to amino acid residues 72-88 of human BDNF (precursor)
Isotype:	IgG
Specificity:	Pro-domain of the BDNF protein
Cross-Reactivity:	Human, Mouse
Cross-Reactivity (Details):	The antibody is specific for proBDNF, it does not crossreact with proNGF, proNT-3 or mature BDNF.
Predicted Reactivity:	Mouse,rat - 16,17 amino acid residues identical

Product Details

Characteristics:	Guinea pig Anti-proBDNF Antibody is directed against the prodomain region of human proBDNF. Guinea pig Anti-proBDNF Antibody , raised in guinea pig, can be used in western and immunohistochemistry applications. In addition, the antibody is an excellent tool for easy multiplex staining studies. It has been designed to recognize proBDNF from mouse, rat and human samples. The antigen used to immunize guinea pigs is the same as Anti-proBDNF Antibody (ABIN7043558, ABIN7044753 and ABIN7044754) raised in rabbit. Our line of guinea pig antibodies enables more flexibility with our products such as multiplex staining studies, immunoprecipitation, etc.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	Pro BDNF (proBDNF)
Alternative Name:	proBDNF (proBDNF Products)
Background:	Brain-derived neurotrophic factor precursor,Brain derived neurotrophic factor (BDNF) is a member of the neurotrophin family of growth factors that includes nerve growth factor (NGF), neurotrophin-3 (NT-3) and neurotrophin-4/5 (NT-4/5).All neurotrophins are synthesized as preproneurotrophin precursors that are subsequently processed within the intracellular transport pathway to yield proneurotrophins that are further processed to generate the mature form. The mature form of BDNF is a non-covalent stable homodimer that can be secreted in both constitutive and regulated pathways.Until recently, the functional role of the neurotrophin prodomains were thought to include assistance in the correct folding of the mature protein and the sorting of the neurotrophins into the constitutive or regulated secretory pathway. However, a growing body of evidence suggests that the uncleaved proneurotrophin precursors can be secreted from cells and that they may mediate different biological functions.The functional importance of the prodomain of BDNF was recently demonstrated in a study showing that a polymorphism that replaces valine for methionine at position 66 of the prodomain, is associated with memory defects and abnormal hippocampal function in humans. Another recent study showed that the regulated extracellular cleavage of proBDNF to mature BDNF by plasmin is necessary for establishing late-phase long-term potentiation (L-LTP), a process that involves long-lasting changes in the structure and function of hippocampal synapses. Finally, proBDNF was shown to be decreased in the brains of patients suffering from Alzheimer's disease.Mature BDNF binds to the specific tyrosine kinase receptor TrkB and to p75NTR, a member of the TNF receptor superfamily. proBDNF can similarly bind both receptors although it appears to have a greater affinity for the p75NTR receptor.

Target Details

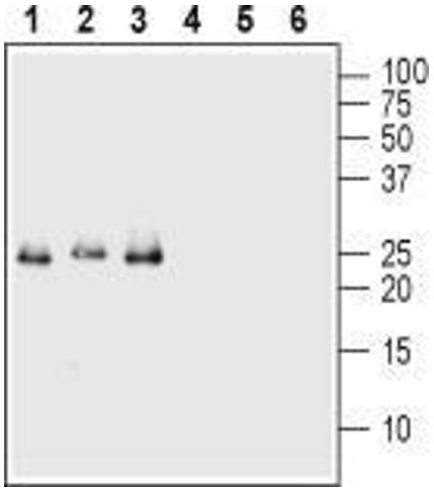
	Alternative names: proBDNF, Brain-derived neurotrophic factor precursor
Gene ID:	627
NCBI Accession:	NM_170735
UniProt:	P23560

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:1000 Application Dilutions Western blot wb: 1:200
Comment:	Positive Control: PCP-B257 Negative Control: (ABIN7236605) Blocking Peptide: (ABIN7236605)
Restrictions:	For Research Use only

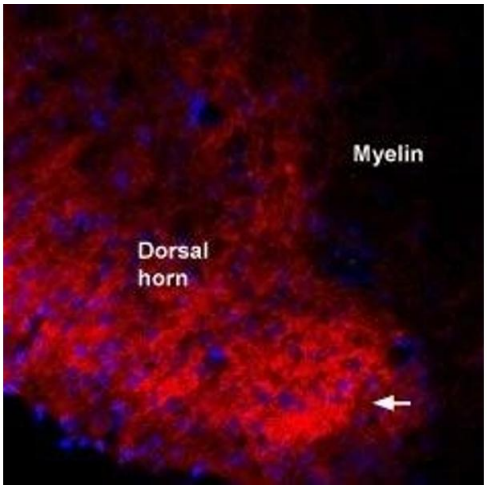
Handling

Format:	Lyophilized
Reconstitution:	Recosntitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).



Western Blotting

Image 1. Western blot analysis of 50 ng of each Recombinant human Val66Met proBDNF (cleavage resistant) protein (#B-456) (lanes 1 and 4), Recombinant mouse proBDNF protein (#B-240) (lanes 2 and 5) and Recombinant human proBDNF protein (#B-257) (lanes 3 and 6): - 1-3. Guinea pig Anti-proBDNF Antibody (ABIN7043557, ABIN7045388 and ABIN7045389), (1:200).4-6. Guinea pig Anti-proBDNF Antibody, preincubated with proBDNF Blocking Peptide (#BLP-NT006).



Immunohistochemistry

Image 2. Expression of proBDNF in rat spinal cord - Immunohistochemical staining of immersion-fixed, free floating rat spinal cord frozen sections using Guinea pig Anti-proBDNF Antibody (ABIN7043557, ABIN7045388 and ABIN7045389), (1:1000). proBDNF (red) is detected in the superficial layer (arrow) of the dorsal horn of the spinal cord. The myelinated columns are devoid of staining. Cell nuclei are stained with DAPI (blue).