

Product datasheet for **SC124461**

BDNF (NM_001709) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BDNF (NM_001709) Human Untagged Clone
Tag:	Tag Free
Symbol:	BDNF
Synonyms:	ANON2; BULN2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC124461 sequence for NM_001709 edited (data generated by NextGen Sequencing)

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ATGACCATCCTTTTCCTTACTATGGTTATTTCACTTTTGTTGCATGAAGGCTGCCCCC
ATGAAAGAAGCAAACATCCGAGGACAAGGTGGCTTGGCCTACCCAGGTGTGCGGACCCAT
GGGACTCTGGAGAGCGTGAATGGGCCAAGGCAGGTTCAAGAGGCTTGACATCATTGGCT
GACACTTTCGAACACGTGATAGAAGAGCTGTTGGATGAGGACCAGAAAGTTCGGCCCAAT
GAAGAAAACAATAAGGACGCAGACTTGTACACGTCCAGGGTGATGCTCAGTAGTCAAGTG
CCTTTGGAGCCTCCTTCTCTTTCTGCTGGAGGAATACAAAAATTACCTAGATGCTGCA
AACATGTCCATGAGGGTCCGGCGCCACTCTGACCCTGCCCGCGAGGGGAGCTGAGCGTG
TGTGACAGTATTAGTGAGTGGTAACGGCGGCAGACAAAAGACTGCAGTGGACATGTCG
GGCGGGACGGTCACAGTCTTAAAAGGTCCCTGTATCAAAAGGCCAACTGAAGCAATAC
TTCTACGAGACCAAGTGCAATCCCATGGGTTACACAAAAGAAGGCTGCAGGGGCATAGAC
AAAAGGCATTGGAATCCAGTGCCGAACCTACCCAGTCGTACGTGCGGGCCCTTACCATG
GATAGCAAAAAGAGAATTGGCTGGCGATTATAAGGATAGACACTTCTTGTGTATGTACA
TTGACCATTAAGGGGAAGATAG
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Clone variation with respect to NM_001709.4



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5' Read Nucleotide Sequence: >OriGene 5' read for NM_001709 unedited
 CGTAGCGCCTCGGGCTCCCGGGCCGGACAGAGGAGCCAGCCCGGTGCGCCCCTCCACCTC
 CTGCTCGGGGGGCTTTAATGAGACACCCACCGCTGCTGTGGGGCCGGCGGGGAGCAGCAC
 CGCGACGGGGACCGGGCTGGGCGCTGGAGCCAGAATCGGAACCACGATGTGACTCCGCC
 GCCGGGGACCCGTGAGGTTTGTGTGGACCCGAGTTCCACCAGGTGAGAAGAGTGATGAC
 CATCCTTTTCCTACTATGGTTATTTCACTTTGGTTGCATGAAGGCTGCCCCATGAA
 AGAAGCAAACATCCGAGGACAAGGTGGCTTGGCCTACCCAGGTGTGCGGACCCATGGGAC
 TCTGGAGAGCGTGAATGGGCCAAGGCAGGTTCAAGAGGCTTGACATCATTGGCTGACAC
 TTTCGAACACGTGATAGAAGAGCTGTTGGATGAGGACCAGAAAAGTTCGGCCCAATGAAGA
 AAACATAAGGACGCAGACTTGTACACGTCCAGGTGATGCTCAGTAGTCAAGTGCCTTTG
 GAGCCTCCTCTTTCTGCTGGAGGAATACAAAAATTACCTAGATGCTGGAACATG
 TCCATGAGGGTTCGGGGCCACTTTGACCTTGCCCGCCGAGGGCAGCTGACCGTGTGCGAC
 AGTTTTAGTGAGTGGTCAACGGCCGTTAAACAATAGACTGAGTGGACATGTTGGACGGT
 ACGGCTCAAACCTTAGTAAGGCCCTGTTCAAAGGCTACTGAATCTTTTACAATCC
 AGTGTTT

3' Read Nucleotide Sequence: >OriGene 3' read for NM_001709 unedited
 CTATGGAACGGCGCCGCAATCTAGGATCGAGTTTTTTTTTTTTTTTATAATAAAAC
 ACGTTTTTCATGTTTGTGTACAGTAAAGAGAAAAAACCCAGAACCCCGAGTTTTATGT
 ACTTTGAAAATATATTTAAAAACATTAATAATTCTATTTTAAACATATATTATATGTT
 AATTAGTACACTTAAATAGAAGTGTATTTACAATAGGCTTCTGATGCGGTTAAGTTTTA
 ATGCCAATTTTTTCAATAACATAATTATATAAATACTAAAAACAATAAATATTGTT
 TTTTGTGTTTACATGGTGAATAATCTTTACCATAGAGAGAACAAGGCCACAGACATTTA
 CTTACATTTTCAATGGGAATCGCCATAAAAAAGCAACAGGCCCTGCTGCCATGCATGAAAC
 ACTTCTGCCACAAGAGACCACAGCAAGACTTTAAAAACAACAAAACAGAACAAGAA
 CGGACACAACAGAGAGAGATTTTAAACAAAATAAATCTTAGGTCAACATAAACCATCAAGC
 ATGTGACTGTGATGTATCTTATTGGGTAAGAGGCCACTGACCACACAATTGCTGGATGT
 GTCTCCTATGAAACCACTTAACAGATCTGGCCCTTGAATCCTTTAAGTTTGTGATGGGG
 GGTGTTGTTGTTTTAACTTGCCCTCAAAGAAGCTGCCTAAAGTTGACACATACCACAT
 ATTCGAAGCATTTCCCTTACATATTTAAAAATAATTACAAAGATTATTTTTCAAACAACAC
 CAAACAAATCTACACTACGTAAAGTCTTTCTTTTAAAGAAGTATTCAGATGGTACTG
 GGAAAGACTACCTTAAATGAAACGATTGACAAATTGAAATTTCTTGCTGATGGGATCTTC
 ATTCCTGGGGTATGGGCGAAATCNCCTTTGGCTTATCCTACACCTACTAAGAGCAAGAA
 TTGCTGGCGGCTTTCTGAACCTAAAGAGCTGGTCCAGTGGG

Restriction Sites: NotI-NotI

ACCN: NM_001709

Insert Size: 4200 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001709.3](#), [NP_001700.2](#)

RefSeq Size: 3972 bp

RefSeq ORF: 744 bp

Locus ID: 627

UniProt ID: [P23560](#)

Cytogenetics: 11p14.1

Domains: NGF

Protein Families: Adult stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Induced pluripotent stem cells, Secreted Protein, Transmembrane

Protein Pathways: Huntington's disease, MAPK signaling pathway, Neurotrophin signaling pathway

Gene Summary:

This gene encodes a member of the nerve growth factor family of proteins. Alternative splicing results in multiple transcript variants, at least one of which encodes a preproprotein that is proteolytically processed to generate the mature protein. Binding of this protein to its cognate receptor promotes neuronal survival in the adult brain. Expression of this gene is reduced in Alzheimer's, Parkinson's, and Huntington's disease patients. This gene may play a role in the regulation of the stress response and in the biology of mood disorders. [provided by RefSeq, Nov 2015]

Transcript Variant: This variant (4), also known as VIb or BDNF5, differs in the 5' UTR and represents use of an alternate promoter compared to variant 1. Variants 1, 2, 4, 5, and 7-16 encode the same isoform (a).