

## Product datasheet for **RC221645**

### BRN4 (POU3F4) (NM\_000307) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** BRN4 (POU3F4) (NM\_000307) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** BRN4  
**Synonyms:** BRAIN-4; BRN-4; BRN4; DFN3; DFNX2; OCT-9; OTF-9; OTF9  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC221645 representing NM\_000307  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCCACAGCTGCCTCGAATCCCTACAGCATTCTCAGTTCACCTCCCTAGTCCATGCGGACTCTGCGG  
 GCATGCAGCAGGGGAGTCTTTCCGCAACCCTCAGAACTTCTCCAAAGTGATTACTTGCAGGGAGTTCC  
 CAGCAATGGGCATCCCCTCGGCATCACTGGGTGACCAGTCTGAGCGACGGGGCCCATGGTCTCCACA  
 CTGGCCACCAGCCCCCTGGACCAGCAGGACGTGAAGCCCGGGCGGAAGACCTGCAACTGGGTGCGATCA  
 TCCATCACCGCTGCCACACGTAGCCACCACTACCGCACACTAACCACCCCAACGCCTGGGGGCCAG  
 CCCGGCACGAACCCGCTATCACGTCAAGCGGCCAACCCCTCAACGTGTACTCGCAGCCTGGCTTACC  
 GTGAGCGGCATGCTGGAACACGGGGGACTACCCACCTCCAGCTGCCGCCTCTGCACAGAGCCTGCACC  
 CGGTGCTCCGAGAGCCCCGGATCACGGCGAACTGGGCTCGCACCATGGCAGGATCACTCCGACGAGGA  
 GACGCCAACCTCTGATGAGTTGGAACAGTTCGCCAAACAATTCAAACAAGAAGAATCAAGTTGGGCTTC  
 ACGCAGGCCGACGTGGGTTGGCGCTGGGCACACTGTATGGTAACGTGTTCTCGCAGACCACCATCTGCA  
 GGTTCGAAGGCTTGCAGCTGAGCTTCAAAAATATGTGCAAGCTGAAGCCCTGCTGAACAAGTGGCTGGA  
 GGAGGCGGATTCGTCCACAGGGAGCCCGACCAGCATTGACAAGATCGCTGCACAGGGCCGAAGCGCAAG  
 AAGCGGACCTCCATCGAGGTGAGTGTCAAGGGCGTACTGGAGCGCATTTCCTCAAGTGTCCCAAGCCTG  
 CCGCGCAGGAGATCTCCTCGCTGGCAGACAGCCTCCAGTTGGAGAAGGAAGTGGTGCCTGTCTGGTTCTG  
 TAATCGAAGACAAAAAGAAAAAAGAAATGACTCCGCCAGGGGATCAGCAGCCGCATGAGGTTTATTGCAC  
 ACCGTGAAAACAGACACATCTTGCCATGATCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTAA



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**Protein Sequence:** >RC221645 representing NM\_000307  
Red=Cloning site Green=Tags(s)

MATAASNYPYSILSSTSLVHADSAGMQQGSFPRNPQKLLQSDYLQGVPSNGHPLGHHWVTSLSDDGGPWSST  
 LATSPLDQQDVKPGRELDLQGAIIHHRSPHVAHHSPTNHPNAWGASAPNPISITSSGQPLNVYSQPGFT  
 VSGMLEHGGLTPPPAAASAQSLHPVLRPPDHGELGSHHCQDHSDEETPTSDELEQFAKQFKQRRIKLGF  
 TQADVGLALGTLYGNVFSQTTICRFEGLQLSFKNMCKLKPLLKWLLEEADSSSTGSPTSIDKIAAQGRKRK  
 KRTSIEVSVKGVLETHFLKCPKPAAQEISSLADSLQLEKEVVRVWFCNRRQKEKRMTPPGDQQPHEVYSH  
 TVKTDTSCHDL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg3179\\_b01.zip](https://cdn.origene.com/chromatograms/mg3179_b01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_000307

**ORF Size:** 1083 bp

**OTI Disclaimer:** 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](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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.

**RefSeq:** [NM\\_000307.3](#)

**RefSeq Size:** 1481 bp

**RefSeq ORF:** 1086 bp

**Locus ID:** 5456

**UniProt ID:** [P49335](#)

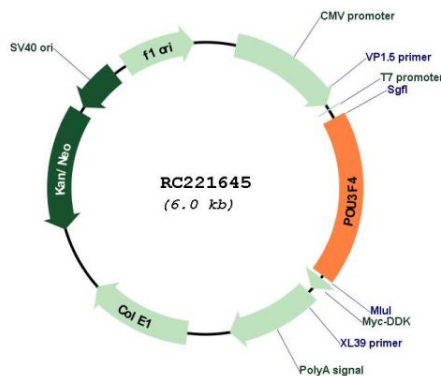
**Cytogenetics:** Xq21.1

**Protein Families:** Druggable Genome, Transcription Factors

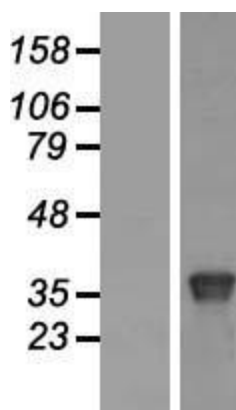
**MW:** 39.2 kDa

**Gene Summary:** This gene encodes a member of the POU-III class of neural transcription factors. This family member plays a role in inner ear development. The protein is thought to be involved in the mediation of epigenetic signals which induce striatal neuron-precursor differentiation. Mutations in this gene are associated with X chromosome-linked nonsyndromic mixed deafness. [provided by RefSeq, Dec 2012]

### Product images:



Circular map for RC221645



Western blot validation of overexpression lysate (Cat# [LY424806]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221645 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified POU3F4 protein (Cat# [TP321645]). The protein was produced from HEK293T cells transfected with POU3F4 cDNA clone (Cat# RC221645) using MegaTran 2.0 (Cat# [TT210002]).