

Product datasheet for MR223071

Pou4f2 (NM_138944) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pou4f2 (NM_138944) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pou4f2
Synonyms:	Brn-3.2; Brn-3b; Brn3b; mBrn3-3R; Pou4f-rs1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR223071 representing NM_138944 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGATGATGATGTCCCTGAACAGCAAGCAGGCGTTCAGCATGCCTCACGCAGGCAGCCTGCACGTGGAGC
CCAAGTACTCGGCGCTACACAGTGCCTCCCCGGGCTCCTCTGCGCCCGCGGCCCTCGGCCAGTTCCTCC
TAGCAGCTCCAGCAACGCTGGCGCGCGCGGTGGCGCGGAGGCGGAGCGCGCGGCCGGCCGAGCAGC
AGTTCAGCAGCAGTGGCAGCGCGGCAGCGCGCGCGGGGGCTCGGAGGCGATGCGGAGAGCTTGTC
TTCCAACCCACCGAGCAATATATTCGGCGGGCTGGATGAGAGTCTGCTGGCCCGTGCCGAGGCTCTGGC
CGCCGTGGACATCGTCTCCAGAGTAAGAGCCACCACCACCATCCGCCCCACCACAGCCCTTCAAGCCG
GACGCCACTTACCACACCATGAACACCATCCCGTGCACGTGCGCAGCCTCCTCTTCTGTGCCATCT
CGCACCCGTCCGCTCTGGCTGGCACCCATCACCACCACCACCACCACCATCACCACCATCACCAGCCGCA
CCAGGCGCTGGAGGGCGAGCTGCTTGAGCACCTAAGCCCCGGGCTGGCCCTGGGAGCTATGGCGGGCCCC
GACGGCACGGTGGTGTCCACTCCGGCTCACGCACCACACATGGCCACCATGAACCCCATGCACCAAGCAG
CCCTGAGCATGGCCACGCACATGGGCTGCCCTCGCACATGGGCTGCATGAGCGAGCTGGATGCAGACCC
GCGGGACCTGGAGGCGTTCGCCGAGCGTTTCAAGCAGCGACGCATCAAGCTGGGAGTGACCCAGGCAGAT
GTGGGCTCGGCGCTGGCCAACCTCAAGATCCCGGGCGTGGGCTCGCTCAGCCAGAGCACCATCTGCAGGT
TTGAGTCTCTCACGCTGTACACAACAACATGATCGCGCTCAAGCCCATCCTGCAGGCGTGGCTGGAGGA
AGCTGAGAAATCCCACCGCAGAGAAGCTCACTAAGCCGGAGCTCTTCAATGGCGCGGAGAAGAAGCGCAAG
CGCACGTCCATCGCGGCCCGGAGAAGCGCTCTCTGGAAGCCTACTTCGCCATCCAGCCAAGGCCCTCT
CGGAGAAGATCGCGGCCATCGCCGAAAAGCTGGATCTCAAGAAAAATGTGGTGCGCGTCTGGTTCTGCAA
CCAGAGGCAGAAACAGAAGAGAATGAAATACTCTGCCGCATT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR223071 representing NM_138944
Red=Cloning site Green=Tags(s)

MMMMSLNSKQAF SMPHAGSLHVEPKYSALHSASPSSSAPAAAPSASSPSSSSNAGGGGGGGGGGGGGRRSS
 SSSSSSGSGGGGGGSEAMRRACLPTPPSNIFGGLDESL LARAEALAAVDIVSQSKSHHHHPHHSFPFKP
 DATYHTMNTIPCTSAASSSSVPI SHPSALAGTHHHHHHHHHHHQPHQALEGELLEHLSPGLALGAMAGP
 DGTVVSTPAHAPHMATMNP HQAAL SMAHAHGLPSHMGCMSD V DADPRDLEAF AERFKQRRRIKLGVTQAD
 VGSALANLKIPGVGSL SQTICRFESL TL SHNNMIALKPILQAWLEEAEKSHREKLT KPEL FN GA EKKRK
 RTSIAAPEKRSLEAYFAIQPRPSSEKIAAIAEKLDL KKNVVRVWFCNQRQKQKRMKYSAGI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_138944

ORF Size: 1233 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.

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

RefSeq: [NM_138944.3](#)

RefSeq Size: 3212 bp

RefSeq ORF: 1236 bp

Locus ID: 18997

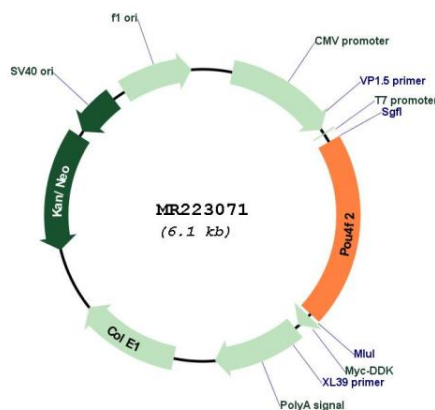
UniProt ID: [Q63934](#)

Cytogenetics: 8 C1

MW: 43.6 kDa

Gene Summary:

Tissue-specific DNA-binding transcription factor involved in the development and differentiation of target cells (PubMed:7904822, PubMed:8995448, PubMed:8972215, PubMed:10357904, PubMed:10414983, PubMed:11163266, PubMed:17668438, PubMed:25775587). Functions either as activator or repressor by modulating the rate of target gene transcription through RNA polymerase II enzyme in a promoter-dependent manner (PubMed:7904822, PubMed:7935408, PubMed:8065921, PubMed:7852360, PubMed:7797498, PubMed:8662774, PubMed:9694219, PubMed:10526314, PubMed:15733064, PubMed:17145718, PubMed:18368538). Binds to the consensus octamer motif 5'-AT[A/T]A[T/A]T[A/T]A-3' of promoter of target genes (PubMed:7904822, PubMed:8290353, PubMed:9111308, PubMed:10414983, PubMed:16152597, PubMed:17668438, PubMed:24643061). Plays a fundamental role in the gene regulatory network essential for retinal ganglion cell (RGC) differentiation (PubMed:8632990, PubMed:10357904, PubMed:25775587). Binds to an octamer site to form a ternary complex with ISL1; cooperates positively with ISL1 and ISL2 to potentiate transcriptional activation of RGC target genes being involved in RGC fate commitment in the developing retina and RGC axon formation and pathfinding (PubMed:8995448, PubMed:9261145, PubMed:8972215, PubMed:10357904, PubMed:11163266, PubMed:24643061, PubMed:25775587). Inhibits DLX1 and DLX2 transcriptional activities preventing DLX1- and DLX2-mediated ability to promote amacrine cell fate specification (PubMed:21875655). In cooperation with TP53 potentiates transcriptional activation of BAX promoter activity increasing neuronal cell apoptosis (PubMed:17145718). Negatively regulates BAX promoter activity in the absence of TP53 (PubMed:17145718). Acts as a transcriptional coactivator via its interaction with the transcription factor ESR1 by enhancing its effect on estrogen response element (ERE)-containing promoter (PubMed:9448000). Antagonizes the transcriptional stimulatory activity of POU4F1 by preventing its binding to an octamer motif (PubMed:7935408, PubMed:8065921, PubMed:8537352, PubMed:7852360, PubMed:8662774). Involved in TNFSF11-mediated terminal osteoclast differentiation (PubMed:17668438).[UniProtKB/Swiss-Prot Function]

Product images:


Circular map for MR223071

