

Product datasheet for **MR209332**

Grhl3 (NM_001013756) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Grhl3 (NM_001013756) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Grhl3
Synonyms:	A1561912; ct; Get1; Som; Tfcp2l4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR209332 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCGAATGAACCTTGTATTCAGGTCTGTGCGGTTGCTGAAGAATGACCCTGTGAGCTTCCAGAAGTTTC
 CCTACAGTAATGAGGACGAGGCCTGGAAGACATACCTGGAGAACCCTTTGACGGCTGCCACCAAAGCCAT
 GATGAGAGTCAACGGGGACGAGGAGAGTGTGGCTGCTCTGAGCTTCTCTACGACTACTATATGGGTCCC
 AAGGAGAAGCGGATACTGTCTCCAGCACTGGTGGCCGGAATGACCAAGGAAAGAAGTTCTACCACAGCA
 TGGACTATGAGCCGGATCTTGCCCCCTCGAGAGCCCCACACACCTCATGAAATTTTGGACAGAAACGT
 GTCTGGAAGTCCAGACTACACAGACCAGCTCAAGAAAAACAATCTGCTAGGCTTGAGGGGGTTCTACCC
 ACCCCCGCAAGACCAATACCGTCCCCCAGGTCGAGTAACTGGAAGCCAGCTCCATGGACAGCTACC
 TCTTGCCCGCCAGTGACATATATGACAATGGCTCCCTCAACTCATTATTTGAGAGCATTCATGGGGTTCC
 ACCCACACAGCGTGGCAGCCAGACAGCACCTTCAAAGATGACCCACAGGAGTCTCTGCTTCCCTGAT
 ATTCTGAAGACATCCCCGACCCCCATGCCAGAGGATTATCCAGGCCTCAAGAGTGACTTTGAATACA
 CCCTGGGCTCCCCAAAGCCATTACATCAAAGCAGGGGAGTACCCATGGCCTACCTCAACAAGGGTCA
 GTTCTACCCCGTACCCTACGCACCCAGCAGGAGGAAAGGCCTCGCTCTGTCTCCAGCAAAGTCAAG
 AGCGTGGTGATGGTCTGTTGATAATGACAAGGTCCCGTGGAGCAGCTGCGTTTCTGGAGGCACTGGC
 ATCCCGGCAGCCACCAGCAAGCAGCGCTCATCGACGTAGCTGACTGTAAGGAAAACCTCAACACGGT
 CCAGCACATTGAAGAGGTGGCCTATAACCGCTGTCTTTGTGTGGAATGTAACGAGGAAGCAAGGTG
 TTTATCGGTGCAACTGTCTGAGCACAGACTTCTCCTCGAGAAGGGAGTGAAGGGTGTCCCCTGAAT
 TGCAAATTGACACCTATGACTGTGGAGCAGGACTGAGCGCTGGTACACCGTGTCTGCCAGATCAA
 GATCTTCTGTGATAAGGGAGCTGAGAGGAAGATGCGCGATGATGAACGGAAGCAGTTTCAAGGAAGGTC
 AAGTGCCAGACTCCAGTAACAATGCAGGAATCAAGGGTGCCTGCTGTGAGGCTTCAAGGGCAATGAGA
 CCACATACTTGCGGCCAGAACTGACCTGGAGACCCAGCCTGTGTTGTTATCCCCAATCTGCATTTTTC
 CAGCCTACAGCGCCAGGAGGGTTGTCCCCTCAGCAGGACACAGCAGCTCTGACAGGCTGCCTCTGAAG
 CGAACCTGCTCACCTTTGCTGAGGAGTTTGGCCTTCTCCTTAAACAAGCAAGGAAGATGACCTTC
 AGAGAGTTCTGTTGATGTGAGGAGGGAGACAGAGGAGTGTGACGCGCTCATGTTGAAGACCCCGGA
 CCTGAAGGGCCTGAGGAATGCGATCTCTGAGAAGTACGGCCTCCCCGAGGAGAATATTTGCAAAGTCTAC
 AAGAAATGCAAGCGAGGCATCCTGGTTAACATGGACAACAACATCATCCAACACTACAGCAACCACGTGG
 CCTTCTGCTGGACATGGGTGAGCTGGACGGCAAGATCCAGATCATCCTGAAGGAGCTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR209332 protein sequence
 Red=Cloning site Green=Tags(s)

MSNELDFRSVRLKNDPVSFQKFPYSNEDEAWKTYLENPLTAATKAMMRVNGDEESVAALSFLYDYVMGP
 KEKRIILSSSTGGRNDQGGKFFYHSM DYEPDLAPLESPTLHMKFLTENVSGSPDYTDQLKKNLLGLEGLVLP
 TPGKTNTPVPPGSKLEASSMDSYLLPASDIYDNGSLNSLFESIHGVPPTQRWQPDSTFKDDPQESLLFPD
 ILKTSPPPCPEDYPLKSDFEYTLGSPKAIHIKAGESPMAYLNKGQFYPVTLRTPAGGKGLALSSSKVK
 SVVMVFDNDKVPVEQLRFWRHWSRQPTAKQRVIDVADCKENFNTVQHIEEVAYNALSFVWNVNEEAKV
 FIGVNCLSTDFSSQKGVKGVPLNLQIDTYDCGAGTERLVHRAVCQIKIFCDKGAERKMRRDDEKQFRKRV
 KCPDSSNAGIKGCLLSGFRGNETTYLRPETDLETQPVLFIPLNHFSSLQRPGGVVP SAGHSSDRPLPK
 RTCSPFAEEFELPSKQAKEDDLQRVLLYVRRETEEVFDALMLKTPDLKGLRNAISEKYGLPEENICKVY
 KKCKRGILVNMNIIQHYSNHVAFLLDMGELDGKIQIILKEL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_001013756

ORF Size: 1812 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_001013756.2](#)

RefSeq Size: 2798 bp

RefSeq ORF: 1812 bp

Locus ID: 230824

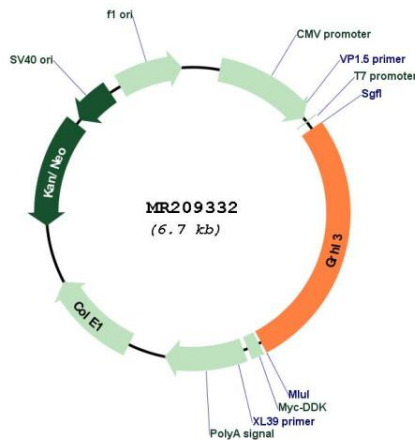
UniProt ID: [Q5FWH3](#)

Cytogenetics: 4 67.76 cM

MW: 67.8 kDa

Gene Summary: Transcription factor playing important roles in primary neurulation and in the differentiation of stratified epithelia of both ectodermal and endodermal origin. Binds directly to the consensus DNA sequence 5'-AACCGGTT-3' acting as an activator and repressor on distinct target genes. Essential for epidermal differentiation and barrier formation at the end of embryogenesis with TGM3 as critical direct target (PubMed:21081122, PubMed:20654612, PubMed:25347468). Exhibits functional redundancy with GRHL2 in epidermal morphogenetic events such as eyelid fusion and epidermal wound repair (PubMed:21081122). Despite being dispensable during normal epidermal homeostasis in the adulthood, is again required for barrier repair after immune-mediated epidermal damage, regulates distinct gene batteries in embryonic epidermal differentiation and adult epidermal barrier reformation after injury (PubMed:25347468). Plays unique and cooperative roles with GRHL2 in establishing distinct zones of primary neurulation. Essential for spinal closure, functions cooperatively with GRHL2 in closure 2 (forebrain/midbrain boundary) and posterior neuropore closure (PubMed:14608380, PubMed:20654612). Also required for proper development of the oral periderm (PubMed:24360809). No genetic interaction with GRHL1, no functional cooperativity due to diverse target gene selectivity (PubMed:21081122).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR209332