

## Product datasheet for **MG223939**

### Grhl1 (NM\_145890) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Grhl1 (NM_145890) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Grhl1
Synonyms:	LBP-32; MGR; Tcfcp2l2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG223939 representing NM\_145890  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTTTCTCCTTGATGATGAAGTGTGTGACCTAAACAGCATACCAATGTGACGGAGCAGCCCTCATT  
 CTGCTGGAGAAAACAGGGTGCAAGTGTGAAAAACGTGCCCTTCAACATCGTCTCCCCATAGCAACCA  
 GCTGGGCATTGATAAGAGAGGCCATCTGACAGCTCCCGATACAACAGTCACTGTCTCCATAGCAACCATG  
 CCTACCCACTCCAAGACAGAAATCCAGCCGCACGGCTTTGCTGTGGGAATCCCACCAGCCGTGTACC  
 ACTCTGAGCCCACCGAAGTGTGGTGGTTTTGACCGAGCCTCAGCACTGATCAGTTCACTCTGGCAC  
 TCAGCCCCCAATGCTCAGCGGAGGACTCCAGACTCCACCTTCTCCGAGACCTTCAAGGAGGGCCTTCA  
 GAGTTTTCTCCCTCGGAAGTCAAGCTTCCGATGCCGGGCATGAATTCAGAGGACTATGTCTTTGACA  
 ATGTTTCTGGAAACAATTTGAGTATACCTGGAAGCCTCAAGTCACTCGGCAGAAGCAAGGGGACAG  
 CACTATGACATACCTGAATAAAGGCCAGTTCTATCCTGTACCTTAAAGGAAGGAAGCAGCAATGAAGGG  
 ATTCACCACCCTATCAGCAAAGTTCGAAGTGTGATCATGGTGGTTTTGCTGAAGACAAAAGCAGAGAAG  
 ACCAGCTGAGACTGGAAGTACTGGCACTCCCGTCAGCACACGGCCAAACAGAGGTGCATTGACATTGC  
 TGACTACAAAAGAAAGCTTCAACTATCAGCAACATTGAGGAGATAGCTTATAACGCCATTTCTTCCAG  
 TGGGACATCAATGATGAGGCAAAGGTCTTCACTCTGTGAACTGCTTGGACACAGATTTCTTCTCAGA  
 AGGGTGTGAAGGGCTTGGCACTCAACATTCAAATCGACACATACAGCTATAACAACCGCAGCAACAAGCC  
 GGTTACCCGGGCTACTGCCAGATAAAGGTCTTCTGCGACAAGGGAGCTGAAAGGAAAATTCGGGATGAA  
 GAACGAAAACAGAGCAAGAGAAAAGTGTCTGACGTTAAAGTGCAGCTGCTTCCCTCGCACAAACGGACAG  
 ACATCACAGTGTCAAGCCCTTCTGGACCTCGACACTCAGCCTGTCTTCTTCAATCCGGACGTGCATTT  
 TACCAACCTGCAGCGGGCAGTCATGTTCTTCCCTCCCCTCTGAAGAAGTGAAGGTGAAGGCTCTGTC  
 TTGAAAAGAGGGCCATTGGAACCGAAGATGACTTTGGAGTTCCTCCTCTGCTAAGCTGACTCGGACAG  
 AAGAACCAAGAGAGTGTCTATGTCCGAAAGGAATCAGAAGAAGTCTTCGACGCCCTGATGCTCAA  
 GACGCCGCTTTGAAGGGCTGATGGAGGCAATTCAGACAAGTATGATGTCCCCATGACAAGATTGGG  
 AAAATATTTAAGAAGTGCAAAAAGGGATCCTCGTGAACATGGACGACAACATTGTGAAGCACTACTCCA  
 ATGAGGACACCTCCAGCTGCAGATAGAGGAAGCCGGCGGCTCGTACAAGCTCACCTGACAGAGATT

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG223939 representing NM\_145890  
 Red=Cloning site Green=Tags(s)

MVLLDDELCDLNSIPNVTEQPLISAGENRVQVLKNVFNIVLPHSNQLGIDKRGHLTAPDPTVTVSIATM  
 PTHSIKTEIQPHGFVAVGIPPAVYHSEPTERVVVFDRSLSTDQFSSGTQPPNAQRRTDPSTFSETFKEGVQ  
 EVFFPSELRLMPGMNSEDYVFDNVSGNFEYTL EASKSLRQKQGDSTMTYLNKGQFYPTLKEGSSNEG  
 IHHPISKVRSVIMVFAEDKSREDQLRHWKYWSRQHTAKQRCIDIADYKESFNTISNIEEIAYNASFT  
 WDINDEAKVFISVNCLSTDFSSQKGVKGLPLNIQIDTYSYNNRSNKPVHRAYCQIKVFCDKGAERKIRDE  
 ERKQSKRKVSDVKVQLLPSHKRTDITVFKPFLDLDTQPVLFI PDVHFTNLQRGSHVLSLPSEELEGE  
 GSV LKRGPFGTEDDFGVPPAKL TRTEEPKRVLL YVRKESEEVFDALMLKTPSLKGLMEAISDKYDVPHDKIG  
 KIFKKCKKILVNMDNIVKHYSNEDTFQLQIEEAGGSYKLTLEI

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_145890

**ORF Size:** 1608 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\\_145890.2](#), [NP\\_665897.2](#)

**RefSeq Size:** 3100 bp

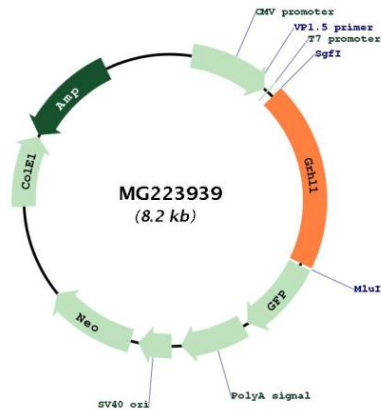
**RefSeq ORF:** 1611 bp

**Locus ID:** 195733

**Cytogenetics:** 12 A1.3

**Gene Summary:**

Transcription factor involved in epithelial development. Binds directly to the consensus DNA sequence 5'-AACCGGT-3' (PubMed:18288204, PubMed:21081122). Important regulator of DSG1 in the context of hair anchorage and epidermal differentiation, participates in the maintenance of the skin barrier (PubMed:18288204, PubMed:24586629). There is no genetic interaction with GRHL3 no genetic interaction with GRHL3, no functional cooperativity due to diverse target gene selectivity during epithelia development (PubMed:21081122). [UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for MG223939