

## Product datasheet for **RG209010**

### Hairless (HR) (NM\_005144) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Hairless (HR) (NM\_005144) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Hairless  
**Synonyms:** ALUNC; AU; HSA277165; HYPT4; MUHH; MUHH1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG209010 representing NM\_005144  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGAGAGTACGCCAGCTTCTGAAGGGCACCCCAACCTGGGAGAAGACGGCCCCAGAGAACGGCATCG  
 TGAGACAGGAGCCCGGCAGCCCGCTCGAGATGGACTGCACCATGGGCCGCTGTGCCTGGGAGAGCTGC  
 TCCCTTTGGAGGGCGTCTGAGCACCCAGACTCCTGGCTTCCCCTGGCTTCCCCAGGGCCCCAAG  
 GACATGCTCCACTTGTGGAGGGCGAGGCCCCAGAATGGGAGAGGAAGTCAACTGGCTGGGCAGCA  
 AAGAGGGACTGCGCTGGAAGGAGGCCATGCTTACCCATCCGCTGGCATTCTGCGGGCCAGCGTGCCACC  
 TCGCTGTGGCCCCCTGATGCCTGAGCATAGTGGTGGCCATCTCAAGAGTGACCCTGTGGCCTCCGGCCC  
 TGGCACTGCCCTTCTTCTGGAGACCAAGATCCTGGAGCGAGCTCCCTTCTGGGTGCCACCTGCTTGC  
 CACCCTACCTAGTGTCTGGCCTGCCCCAGAGCATCCATGTGACTGGCCCTGACCCCGCACCCCTGGGT  
 AACTCCGGGGCCAGCCCAAAGTGCCCTCTGCCTTACGCTTAGGCAGCAAGGGCTTTACTACAAGGAT  
 CCGAGCATTCCCAGGTTGGCAAAGGAGCCCTTGGCAGCTGCGGAACCTGGGTGTTTGGCTTAACTCTG  
 GTGGGCACCTGCAGAGAGCCGGGAGGCCGAACGCCCTTCACTGCACCAGAGGGATGGAGAGATGGGAGC  
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 TTCATCTACCCACCACTAAAGGTGGGGTCTTGGCCCTTGTGGGAAGTGCCAGGAGGGCTGGAGGGG  
 GGTGCCAGTGGAGCCAGCAACCCAGCGAGGAAGTGAACAAGGCCTTGGCCCCAGGGCCTGTCCCCCA  
 GCCACCACCAAGCTGAAGAAGACATGGCTCACACGGCACTCGGAGCAGTTTGAATGTCCACGGGCTG  
 CCCTGAGTTCGAGGAGAGGCCGTTGCTCGGCTCCGGCCCTCAAAGGGCAGGCAGCCCCGAGGTCCAG  
 GGAGCAATGGGCAGTCCAGCCCCAAGCGGCCACCGACCCTTTCCAGGCACTGCAGAACAGGGGGCTG  
 GGGGTTGGCAGGAGTGGGGACACATCGATAGGGAACAAGGATGTGGACTCGGGACAGCATGATGAGCA  
 GAAAGGACCCCAAGATGGCCAGGCCAGTCTCCAGGACCCGGACTTCAGGACATACCATGCCTGGCTCTC



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CCTGCAAAACTGGCTCAATGCCAAAGTTGTGCCAGGCAGCTGGAGAGGGAGGAGGGCACGCCTGCCACT  
 CTCAGCAAGTGCGGAGATCGCCTCTGGGAGGGGAGCTGCAGCAGGAGGAAGACACAGCCACCAACTCCAG  
 CTCTGAGGAAGGCCAGGGTCCGGCCCTGACAGCCGGCTCAGCACAGGCCCTGCCAAGCACCTGCTCAGT  
 GGTTTGGGGGACCAGCTGTGCCGCTGCTGCGGAGGGAGCGGGAGGCCCTGGCTTGGGCCACGGGGAAG  
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 GACAGAAGCTCTTGGGGCACTTGGAGGCCAGGTGCAGGCGCTGAGCCCCCTCGGACTCCCAGCCAGC  
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 CCTGCGGGAGGAGTGGGGCGTGAAGTGTGGACCTGCTCCAGGCCCCCGGAGAGGCCGTGCTGGTGCCT  
 GCAGGGGCTCCCCACAGGTGCAGGGCCTGGTGAACAGTCAAGCGTCACTCAGCACTTCTCTCCCCTG  
 AGACCTCTGCCCTCTGCTCAGCTCTGCCACCAGGGACCCAGCCTTCCCCTGACTGCCACCTGCTTTA  
 TGCCAGATGGACTGGGCTGTGTTCCAAGCAGTGAAGGTGGCCGTGGGGACATTACAGGAGGCCAAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG209010 representing NM\_005144  
 Red=Cloning site Green=Tags(s)

MESTPSFLKGTPTWEKTAPENGI VRQEPGSPPRDGLHHGPLCLGEPAPFWRGVLSTPDSWLPPGFPQGP  
 DMLPLVEGEGPQNGERKVNWLGSKEGLRWKEAMLTHPLAFCGPACPPRCGPMPEHSGGHLKSDPVAFRP  
 WHCPFLLETKILERAPFVWPTCLPPYLVSGLPPEHPCDWPLTPHPWVYSGGQPKVPSAFSLGSKGFYYKD  
 PSIPRLAKEPLAAAEPGLFGLNSGGHLQRAGEAERPSLHQRDGEMAGRQQNPCPLFLGQPDTPVWTSWP  
 ACPPGLVHTLGNVWAGPGDGNLGYQLGPPATPRCPSPEPPVTQRGCCSSYPPTKGGGLGPCGKCQEGLEG  
 GASGASEPSEEVNKASGPRACPPSHHTKLKKTWLTRHSEQFECPRGCPEVEERPVARLRALKRAGSPEVQ  
 GAMGSPAPKRPPDPFPGTAEQGAGGWQEVDRDTSIGNKDVDSGQHDEQKGPQDQASLQDPGLQDIPCLAL  
 PAKLAQCQSCQAAGEGGGHACHSQVRRSPLGGELQEEEDTATNSSSEEGPGSGPDSRLSTGLAKHLLS  
 GLGDRLCRLRREREALAWAQREGQPAVTEDESPGIPRCCSRCHHGLFNTHWRCPRCSHRLCVACGRVAG  
 TGRAREKAGFQEQAEECTQEAGHAACSLMLTQFVSSQALAE LSTAMHQVVKFDIRGHCPQADARVWA  
 PGDAGQQKESTQKTPPTQPSCNGDTHRTKSIKEETPDSAETPAEDRAGRPLPCPSLCELLASTAVKLC  
 LGERIHMAFAPVTPALPSDDRITNILD SIIAQVVERKIQEKALGPGLRAGPGLRKGLGLPLSPVRPRLP  
 PPGALLWLQEPQPCRRGFHLFQEHWRRQGPVLVSGIQRTLQGNLWGTEALGALGGQVQALSPLGPPQPS  
 SLGSTTFWEGFSWPELRPKSDEGSVLLLHRALGDEDTSRVENLAASLPLPEYCALHGKLNLA SYLPPGLA  
 LRPLEPQLWAA YGVSPHRGHLGTKNLCVEVADLVSILVHADTPLPAWHRAQKDFLSGLDGEGLWSPGSQV  
 STVWHVFRAQDAQRIRRF LQMVC PAGA GALEPGAGSCYL DAGLRRRLREEWGVSWCTLLQAPGEAVLP  
 AGAPHVQVGLVSTVSVTQHFLSPETSALSAQLCHQGPSLPPDCHLLYAQMDWAVFQAVKVAVGTLQEA K

TRTRPLE - GFP Tag - V

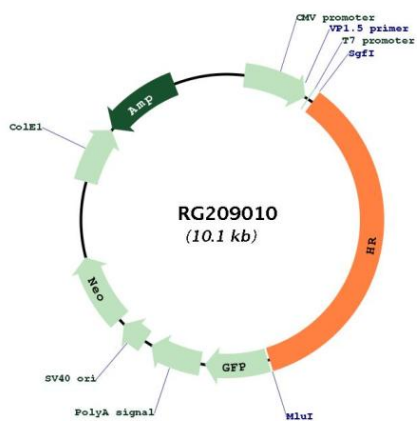
**Restriction Sites:** SgfI-MluI  
**Cloning Scheme:**



**ACCN:** NM\_005144  
**ORF Size:** 3567 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_005144.5</a>
<b>RefSeq Size:</b>	4981 bp
<b>RefSeq ORF:</b>	3570 bp
<b>Locus ID:</b>	55806
<b>UniProt ID:</b>	<a href="#">O43593</a>
<b>Cytogenetics:</b>	8p21.3
<b>Protein Families:</b>	Druggable Genome, Transcription Factors
<b>Gene Summary:</b>	This gene encodes a protein that is involved in hair growth. This protein functions as a transcriptional corepressor of multiple nuclear receptors, including thyroid hormone receptor, the retinoic acid receptor-related orphan receptors and the vitamin D receptors, and it interacts with histone deacetylases. The translation of this protein is modulated by a regulatory open reading frame (ORF) that exists upstream of the primary ORF. Mutations in this upstream ORF cause Marie Unna hereditary hypotrichosis (MUHH), an autosomal dominant form of genetic hair loss. Mutations in this gene also cause autosomal recessive congenital alopecia and atrichia with papular lesions, other diseases resulting in hair loss. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2014]

Product images:



Circular map for RG209010