

Product datasheet for **SC303591**

Hairless (HR) (NM_005144) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Hairless (HR) (NM_005144) Human Untagged Clone
Tag: Tag Free
Symbol: Hairless
Synonyms: ALUNC; AU; HSA277165; HYPT4; MUHH; MUHH1
Mammalian Cell Selection: None
Vector: [pCMV6-XL5](#)
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_005144 edited
GGCCCCGGAGCTGGCCCATGGGGAGCAGGCGCCCGGTGCCGCCACGACGACCGCCACCG
CCCGCGCCGCGACCGGCCGGTGAAGCCCAGGGACCCCTCTCGGAGAGCCCATGAGGG
CAGGAGAGTGATGGAGAGTACGCCAGCTTCTGAAGGGCACCCCAACCTGGGAGAAGAC
GGCCCCAGAGAACGGCATCGTGAGACAGGAGCCCGGCAGCCCGCTCGAGATGGACTGCA
CCATGGGCGCTGTGCCTGGGAGAGCCTGCTCCCTTTGGAGGGGCGTCTGAGCACCC
AGACTCCTGGCTTCCCCCTGGCTTCCCCAGGGCCCAAGGACATGCTCCCACTTGTGGA
GGGCGAGGGCCCCAGAATGGGGAGAGGAAGGTCAACTGGCTGGGCAGCAAAGAGGGACT
GCGCTGGAAGGAGCCATGCTTACCCATCCGCTGGCATTCTCGGGCCAGCGTGCCACC
TCGCTGTGGCCCCCTGATGCCTGAGCATAGTGGTGCCATCTCAAGAGTGACCCTGTGGC
CTTCCGGCCCTGGCACTGCCCTTCTTCTGGAGACCAAGATCCTGGAGCGAGCTCCCTT
CTGGGTGCCACCTGCTTGCACCCCTACCTAGTGTCTGGCCTGCCCCAGAGCATCCATG
TGA CTGGCCCTGACCCCGCACCCCTGGGTATACTCCGGGGGCCAGCCCAAAGTGCCCTC
TGCCCTCAGCTTAGGCAGCAAGGGCTTTTACTACAAGGATCCGAGCATTCCCAGGTTGGC
AAAGGAGCCCTTGGCAGCTGCGGAACCTGGGTTGTTTGGCTTAAACTCTGGTGGGCACCT
GCAGAGAGCCGGGAGGCCGAACGCCCTTCACTGCACCAGAGGGATGGAGAGATGGGAGC
TGGCCGGCAGCAGAATCCTTGCCCGCTCTTCTGGGGCAGCCAGACACTGTGCCCTGGAC
CTCCTGGCCCGCTTGTCCCCAGGCCTTGTTCATACTCTTGGCAACGCTCTGGGCTGGGCC
AGGCGATGGGAACCTTGGGTACCAGCTGGGGCCACCAGCAACCAAGGTGCCCTTCC
TGAGCCGCTGTACCCAGCGGGGCTGCTGTTCATCCTACCCACCCACTAAAGGTGGGGG
TCTTGGCCCTTGTGGGAAGTGCCAGGAGGGCCTGGAGGGGGTGCCAGTGAGGCCAGCGA
ACCCAGCGAGGAAGTGAACAAGGCCTTGGCCCCAGGGCCTGCCCCCAGCCACCACAC
CAAGCTGAAGAAGACATGGCTCACACGGCACTCGGAGCAGTTTGAATGTCCACGCGGCTG
CCCTGAGGTGAGGAGAGGCGGTTGCTCGGCTCCGGCCCTCAAAGGGCAGGCAGCCC
CGAGGTCCAGGGAGCAATGGGCAGTCCAGCCCCAAGCGGCCACCGGACCCTTCCCAGG
CACTGCAGAACAGGGGGTGGGGTTGGCAGGAGGTGCGGGACACATCGATAGGGAACAA
GGATGTGGACTCGGGACAGCATGATGAGCAGAAAGGACCCCAAGATGGCCAGGCCAGTCT



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CCAGGACCCGGGACTTCAGGACATACCATGCCTGGCTCTCCCTGCAAACTGGCTCAATG
 CCAAAGTTGTGCCAGGCAGCTGGAGAGGGAGGAGGGCACGCCTGCCACTCTCAGCAAGT
 GCGGAGATCGCCTCTGGGAGGGGAGCTGCAGCAGGAGGAAGACACAGCCACCAACTCCAG
 CTCTGAGGAAGGCCAGGGTCCGGCCCTGACAGCCGGCTCAGCACAGGCCCTGCCAAGCA
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 GGCTTGGGCCAGCGGAAGGCCAAGGGCCAGCCGTGACAGAGGACAGCCAGGCATTCC
 ACGCTGTGCAGCCGTTGCCACCATGGACTCTTCAACACCCACTGGCGATGTCCCCTG
 CAGCCACCGGCTGTGTGGCCTGTGGTGTGGCAGGCACTGGCGGGCCAGGGAGAA
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 GCACCAGGTCTGGTCAAGTTTGATATCCGGGGGCACTGCCCTGCCAAGCTGATGCCCCG
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 TCCACAACCTTCTGCAATGGCGACACCCACAGGACCAAGAGCATCAAAGAGGAGACCC
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 GGGCCTTGCCTGCGTCCACTGGAGCCCAAGCTCTGGGCAGCCTATGGTGTGAGCCCGCA
 CCGGGGACACCTGGGGACCAAGAACCTCTGTGTGGAGGTGGCCGACCTGGTCAAGCATCT
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 CCGGGCACAGGACGCCAGCGCATCCGCCGCTTCTCCAGATGGTGTGCCCGCCGGGGC
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 GCTGGTGCCTGCAGGGGCTCCCCACCAGGTGCAGGGCCTGGTGAAGCAGTCAAGCTCAC
 TCAGCACTTCTCTCCCTGAGACCTCTGCCCTCTCTGCTCAGCTCTGCCACCAGGGACC
 CAGCCTTCCCCCTGACTGCCACCTGCTTTATGCCCAGATGGACTGGGCTGTGTTCCAAGC
 AGTGAAGGTGGCCGTGGGGACATTACAGGAGGCCAAATAGAGGGATGCTAGGTGTCTGGG
 ATCGGGGTGGGGACAGGTAGACCAGGTGCTCAGCCAGGCACAACCTTCAAGGGGATGG
 CGCTAGGGGACTTGGGGATTTCTGGTCAACCCCAAGCACCCTTGGGCACAAGCAGG
 GCACTCTGTTCCCTCCCTTAAAGCCAACAACCACAGTGCCACCAAGCTCACACCTGTC
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 GGGCAATTGACTTCTCCAATCCCACTCCTCCGAGACCCAGGAGACAAACAGCCCTTC
 CTTGGGAAAACCTTGGGAATCATTCTGGCTTAAACAACACCTCCTCCTGCTCACTCCC
 GCTGAGCCACTTACTGCCCCAGCTCCGTTTCTACCACCGCATCCTCACTGGGCTCACT
 GCAGGCATGCTGAACAAGGGCCTCAACCTTCTGCCCTCCTGCCAAAAGATCTGGGGAG
 TGTGAGGAGAGGGTGGCATCAGGAGCTGCTCAGGCTTGGCGGAGGGAGCGGCATGGGCGA
 TGTCACTCAGCCCTTCCCGGTCGCCCGCTTCCCTCCTTCATGATTTCCATTAAGTCT
 GTTGTGTTGTGAAA

5' Read Nucleotide Sequence:	>OriGene 5' read for NM_005144 unedited TCCGGAATCTAGCCTAAGCCGCGGGACGGATAACAAATTCACACAGGAAACGCCATGACC ATTAAGCCTCTTTAGGTGACACTATAGAACAAGTTTTGTACAAAAAACAGGCTGGTACC GGTCCGGAATCCCGGGATATCGTCGACCCACGCGTCCGGGCCCCGGAGCTGGCCCATGG GGAGCAGGCGCCCGGTGCCGGCCACGACACCGCCACCGCCCGCCGCGACCGGCCGGT GAAGCCCAGGGACCCCCCTCTCGGAGAGCCCCATGAGGGCAGGAGAGTGATGGAGAGTAC GCCCAGCTTCTGAAGGGCACCCCAACCTGGGAGAAGACGGCCCCAGAGAACGGCATCGT GAGACAGGAGCCCGCAGCCCGCCTCGAGATGGACTGCACCATGGGCCGCTGTGCCTGGG AGAGCCTGCTCCCTTTTGGAGGGCGTCTGAGCACCCAGACTCCTGGCTTCCCCTGG CTTCCCCAGGGCCCCAAGGACATGCTCCCACTGTGGAGGGCGAGGGCCCCAGAAATGG GGAGAGGAAAGTCAACTGGCTGGGCAGCAAAGAGGGACTGCGCTGGAAGGAGGCCATGCT TACCCATCCGCTGGCATTCTGCGGGCCAGCGTGCCACCTCGCTGTGGCCCCCTGATGCC TGAGCATAGTGGTGGCCATCTCAAGATGACCCTGTGCCCTCCGGCCCTGGCACTGCCCT TTCCTTCTGGAGACCAAGATCCTGGGACGAGCTTCCTTCTGGGTGCCACCTGCTTGCCA CCCTACCTAATGTACTGGCCTGCCCCAA
Restriction Sites:	NotI-NotI
ACCN:	NM_005144
Insert Size:	4400 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
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:	<ol style="list-style-type: none"> 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_005144.3 , NP_005135.2
RefSeq Size:	4981 bp
RefSeq ORF:	3570 bp
Locus ID:	55806
UniProt ID:	O43593
Cytogenetics:	8p21.3
Protein Families:	Druggable Genome, Transcription Factors

Gene Summary:

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]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (a). Sequence Note: This RefSeq record represents the hairless protein encoded by the primary ORF. Four upstream ORFs (U1HR-U4HR), which may regulate translation of the primary ORF as described in PMID:19122663, are also annotated on this sequence.