

## Product datasheet for **RG209619**

### ACTH (POMC) (NM\_000939) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ACTH (POMC) (NM_000939) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ACTH
Synonyms:	ACTH; CLIP; LPH; MSH; NPP; OBAIRH; POC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG209619 representing NM_000939 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCGAGATCGTGCAGCCGCTCGGGGGCCCTGTTGCTGGCCTTGCTGCTTCAGGCCTCCATGGAAG  
TGCGTGGCTGGTGCCTGGAGAGCAGCCAGTGTGAGGACCTCACCACGAAAGCAACTGCTGGAGTGCAT  
CCGGCCCTGCAAGCCCGACCTCTCGGCCGAGACTCCCATGTTCCCGGAAATGGCGACGAGCAGCCTCTG  
ACCGAGAACCCCGGAAGTACGTCATGGGCCACTTCCGCTGGGACCGATTCCGCCCGCCGCAACAGCAGCA  
GCAGCGGCAGCAGCGGCGCAGGGCAGAAGCGCGAGGACGTCTCAGCGGGGAAGACTGCGGCCCGCTGCC  
TGAGGGCGGCCCGAGCCCCGACGCGATGGTGCCAAGCCGGGCCCGCGAGGGCAAGCGCTCCTACTCC  
ATGGAGCACTTCCGCTGGGGCAAGCCGGTGGGCAAGAAGCGGCGCCAGTGAAGGTGTACCCTAACGGCG  
CCGAGGACGAGTCGGCCGAGGCCTTCCCGCTGGAGTTCAAGAGGGAGCTGACTGGCCAGCGACTCCGGGA  
GGGAGATGGCCCCGACGGCCCTGCCGATGACGGCGCAGGGGCCAGGCCGACCTGGAGCACAGCCTGCTG  
GTGGCGGCGGAGAAGAAGGACGAGGGCCCTACAGGATGGAGCACTTCCGCTGGGCGAGCCCGCCCAAGG  
ACAAGCGCTACGGCGTTTCATGACCTCCGAGAAGAGCCAGACGCCCTGGTGACGCTGTCAAAAACGC  
CATCATCAAGAACGCCTACAAGAAGGGCGAG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG209619 representing NM\_000939  
 Red=Cloning site Green=Tags(s)

MPRSCCSRSGALLLALLLQASMEVRGWCLESSQCQDLTTESNLLECI RACKPDL SAETPMFPGNGDEQPL  
 TENPRKYVMGHRWDRFGRNRSSSSGSSGAGQKREDVSAGEDCGPL PEGGPEPRSDGAKPGPREGKRSYS  
 MEHFRWGKPVGKKRRPVKYYPNGAEDESAEAFPLEFKREL TGQRLREGDGPDPADGAGA QADLEHSL L  
 VAAEKKDEGPYRMEHFRWGSPPKDKRYGGFMTSEKSTPLVTL FKNAI IKNAYKKGE

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000939

**ORF Size:** 801 bp

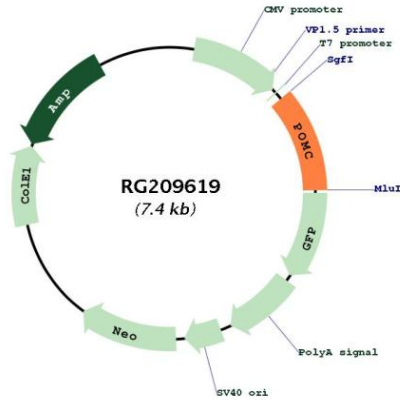
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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).

<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_000939.4</a>
<b>RefSeq Size:</b>	1245 bp
<b>RefSeq ORF:</b>	804 bp
<b>Locus ID:</b>	5443
<b>UniProt ID:</b>	<a href="#">P01189</a>
<b>Cytogenetics:</b>	2p23.3
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Adipocytokine signaling pathway, Melanogenesis
<b>Gene Summary:</b>	<p>This gene encodes a preproprotein that undergoes extensive, tissue-specific, post-translational processing via cleavage by subtilisin-like enzymes known as prohormone convertases. There are eight potential cleavage sites within the preproprotein and, depending on tissue type and the available convertases, processing may yield as many as ten biologically active peptides involved in diverse cellular functions. The encoded protein is synthesized mainly in corticotroph cells of the anterior pituitary where four cleavage sites are used; adrenocorticotrophin, essential for normal steroidogenesis and the maintenance of normal adrenal weight, and lipotropin beta are the major end products. In other tissues, including the hypothalamus, placenta, and epithelium, all cleavage sites may be used, giving rise to peptides with roles in pain and energy homeostasis, melanocyte stimulation, and immune modulation. These include several distinct melanotropins, lipotropins, and endorphins that are contained within the adrenocorticotrophin and beta-lipotropin peptides. The antimicrobial melanotropin alpha peptide exhibits antibacterial and antifungal activity. Mutations in this gene have been associated with early onset obesity, adrenal insufficiency, and red hair pigmentation. Alternatively spliced transcript variants encoding the same protein have been described. [provided by RefSeq, Jan 2016]</p>

Product images:



Circular map for RG209619