

## Product datasheet for **SC300157**

### ACTH (POMC) (NM\_000939) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ACTH (POMC) (NM_000939) Human Untagged Clone
Tag:	Tag Free
Symbol:	ACTH
Synonyms:	ACTH; CLIP; LPH; MSH; NPP; OBAIRH; POC
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL6</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for NM_000939 edited

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CCGGGATGCGTCCCCGCCCTCAGAGAGCAGCCTCCCGAGACAGGGGTCCCACCAATCTTG
TTTGCTTCTGCAGAGCCTCAGCCTGCCTGGAAGATGCCGAGATCGTGCTGCAGCCGCTCG
GGGGCCCTGTTGCTGGCCTTGCTGCTTCAGGCCTCCATGGAAGTGCCTGGCTGGTGCCTG
GAGAGCAGCCAGTGTCAGGACCTCACCACGGAAGCAACCTGCTGGAGTGCATCCGGGCC
TGCAAGCCCGACCTCTCGGCCGAGACTCCCATGTTCCCGGAAATGGCGACGAGCAGCCT
CTGACCGAGAACCCCGAAGTACGTATGGGCCACTTCCGCTGGGACCGATTCCGCCGC
CGCAACAGCAGCAGCAGCGGCAGCAGCGGCGCAGGGCAGAAGCGCGAGGACGTCTCAGCG
GGCGAAGACTGCGGCCCGCTGCCTGAGGGCGGCCCGAGCCCGCAGCGATGGTGCCAAG
CCGGGCCCGCGCAGGGCAAGCGCTCCTACTCCATGGAGCACTTCCGCTGGGGCAAGCCG
GTGGGCAAGAAGCGGCCCGCAGTGAAGGTGTACCCTAACGGCGCCGAGGACGAGTCGGCC
GAGGCCTTCCCCCTGGAGTTCAAGAGGGAGCTGACTGGCCAGCGACTCCGGGAGGGAGAT
GGCCCCGACGGCCCTGCCGATGACGGCGCAGGGGCCAGGCCGACCTGGAGCACAGCCTG
CTGGTGGCGGCCGAGAAGAAGGACGAGGGCCCCCTACAGGATGGAGCACTTCCGCTGGGGC
AGCCCCGCCAAGGACAAGCGCTACGGCGGTTTCATGACCTCCGAGAAGAGCCAGACGCC
CTGGTGACGCTGTTCAAAACGCCATCATCAAGAACGCCCTACAAGAAGGGCGAGTGAGGG
CACAGCGGGGGCCCCAGGGCTACCCTCCCCAGGAGGTCGACCCCAAGGCCCTTGCTCTC
CCCTGCCCTGCTGCCCTCCCAGCCTGGGGGGTCTGGCAGATAATCAGCCTCTTAAAG
CTGCCTGTAGTTAGGAAATAAACCTTTCAAATTTCAAAAAAAAAAAAAAAAAAAAAA
AAAAA
  
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Restriction Sites:	Please inquire
ACCN:	NM_000939
Insert Size:	1100 bp


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<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	The ORF of this clone is found to be a perfect match to NM_000939.2.
<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>	<u>NM_000939.2, NP_000930.1</u>
<b>RefSeq Size:</b>	1245 bp
<b>RefSeq ORF:</b>	804 bp
<b>Locus ID:</b>	5443
<b>UniProt ID:</b>	<u>P01189</u>
<b>Cytogenetics:</b>	2p23.3
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Adipocytokine signaling pathway, Melanogenesis

**Gene Summary:**

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]

Transcript Variant: This variant (2) differs in the 5' UTR compared to variant 3. Variants 1-4 encode the same protein.