

Product datasheet for RC215351

ACTH (POMC) (NM_001035256) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ACTH (POMC) (NM_001035256) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ACTH
Synonyms:	ACTH; CLIP; LPH; MSH; NPP; OBAIRH; POC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC215351 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCGAGATCGTGTGCAGCCGCTCGGGGGCCCTGTTGCTGGCCTTGCTGCTTCAGGCCTCCATGGAAG
TGCGTGGCTGGTGCCTGGAGAGCAGCCAGTGTGAGGACCTCACCACGAAAGCAACTGCTGGAGTGCAT
CCGGGCTGCAAGCCCGACCTCTCGGCCGAGACTCCCATGTTCCCGGAAATGGCGACGAGCAGCCTCTG
ACCGAGAACCCCGGAAGTACGTCATGGGCCACTTCCGCTGGGACCGATTCCGCCCGCAACAGCAGCA
GCAGCGGCAGCAGCGGCGCAGGGCAGAAGCGCGAGGACGTCTCAGCGGGGAAGACTGCGGCCCGCTGCC
TGAGGGCGGCCCGAGCCCCGACGCGATGGTGCCAAGCCGGGCCCGCGAGGGCAAGCGCTCCTACTCC
ATGGAGCACTTCCGCTGGGGCAAGCCGGTGGGCAAGAAGCGGCGCCAGTGAAGGTGTACCCTAACGGCG
CCGAGGACGAGTCGGCCGAGGCCTTCCCGCTGGAGTTCAAGAGGGAGCTGACTGGCCAGCGACTCCGGGA
GGGAGATGGCCCCGACGGCCCTGCCGATGACGGCGCAGGGGCCAGGCCGACCTGGAGCACAGCCTGCTG
GTGGCGGCCGAGAAGAAGGACGAGGGCCCTACAGGATGGAGCACTTCCGCTGGGCGAGCCCGCCCAAGG
ACAAGCGCTACGGCGTTTCATGACCTCCGAGAAGAGCCAGACGCCCTGGTGACGCTGTTCAAAAACGC
CATCATCAAGAACGCCTACAAGAAGGGCGAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC215351 protein sequence
Red=Cloning site Green=Tags(s)

MPRSCCSRSGALLLALLLQASMEVRGWCLESSQCQDLTTESNLLECI RACKPDLSAETPMFPGNGDEQPL
 TENPRKYVMGHFRWDRFGRNRSSSSGSSGAGQKREDVSAGEDCGPLPEGGPEPRSDGAKPGPREGKRSYS
 MEHFRWGKPVGKKRRPVKYYPNGAEDESAEAFPLEFKREL TGQRLREGDGPDPDAGAGA QADLEHSL
 VAAEKKDEGPYRMEHFRWGSPPKDKRYGGFMTSEKSTPLVTLFKNAI IKNAYKKGE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6366_a08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001035256

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).

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_001035256.2](#)

RefSeq Size: 1295 bp

RefSeq ORF: 804 bp

Locus ID: 5443

UniProt ID: [P01189](#)

Cytogenetics: 2p23.3

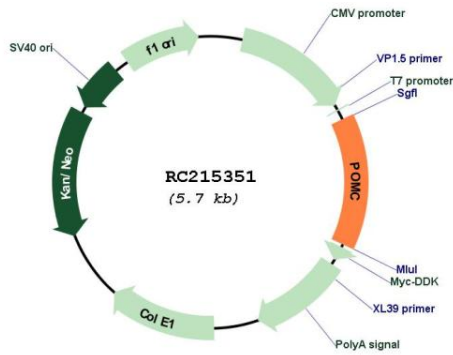
Protein Families: Druggable Genome

Protein Pathways: Adipocytokine signaling pathway, Melanogenesis

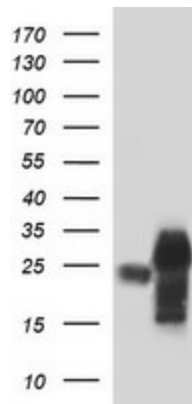
MW: 29.4 kDa

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]

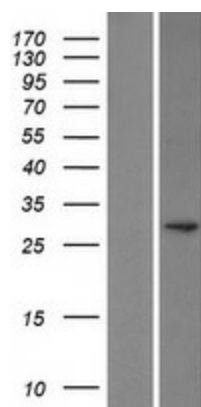
Product images:



Circular map for RC215351



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY POMC (Cat# RC215351, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-POMC (Cat# [TA506610]). Positive lysates [LY422129] (100ug) and [LC422129] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY422129]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215351 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).