

ARG82266 Mouse / Rat ACTH ELISA Kit

Package: 96 wells
Store at: 4°C

Summary

Product Description	ARG82266 Mouse / Rat ACTH ELISA Kit is an Enzyme Immunoassay kit for the quantification of Mouse / Rat ACTH in serum, plasma, cell culture supernatants, tissue homogenate, CSF and urine.
Tested Reactivity	Ms, Rat
Tested Application	ELISA
Specificity	Cross-Reactivity: ACTH (Mouse, Rat), ACTH (Human) and ACTH (18-39) (Human): 100% ACTH (1-24) (Human): 0.01% ACTH (7-38) (Human), beta Endorphin (Rat), alpha MSH, LH-RH and PACAP-38 (Ovine): 0%
Target Name	Mouse / Rat ACTH
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	0.09 ng/ml
Sample Type	Serum, plasma, cell culture supernatants, tissue homogenate, CSF and urine.
Standard Range	0.04 - 25 ng/ml
Sample Volume	50 µl
Precision	Intra-Assay CV: less than 10% Inter-Assay CV: less than 15%
Alternate Names	Alpha-MSH; Beta-MSH; CLIP; Gamma-MSH; LPH; Corticotropin-lipotropin; NPP; ACTH; POMC; Gamma-LPH; Adrenocorticotrophic hormone; MSH; Beta-LPH; Pro-opiomelanocortin; POC

Application Instructions

Assay Time	~ 4 hours
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Properties

Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	POMC
Gene Full Name	proopiomelanocortin
Background	This gene encodes a polypeptide hormone precursor 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 polypeptide precursor 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, Nov 2014]

Function

ACTH stimulates the adrenal glands to release cortisol.

MSH (melanocyte-stimulating hormone) increases the pigmentation of skin by increasing melanin production in melanocytes.

Beta-endorphin and Met-enkephalin are endogenous opiates. [UniProt]

Highlight

Related products:

[ACTH antibodies:](#) [ACTH ELISA Kits:](#)

New ELISA data calculation tool:

[Simplify the ELISA analysis by GainData](#)

PTM

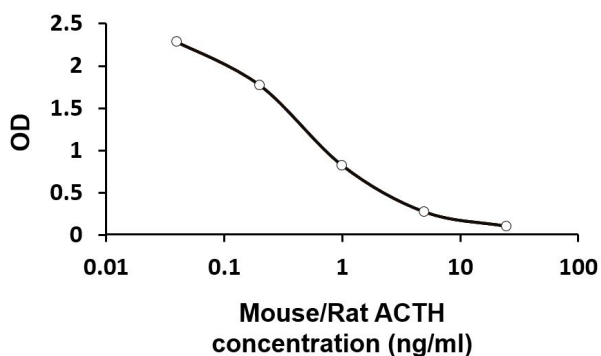
Specific enzymatic cleavages at paired basic residues yield the different active peptides.

O-glycosylated; reducing sugar is probably N-acetylgalactosamine. [UniProt]

Cellular Localization

Secreted. Note=Melanocyte-stimulating hormone alpha and beta-endorphin are stored in separate granules in hypothalamic POMC neurons, suggesting that secretion may be under the control of different regulatory mechanisms. [UniProt]

Images



ARG82266 Mouse/Rat ACTH ELISA Kit standard curve image

ARG82266 Mouse/Rat ACTH ELISA Kit results of a typical standard run with optical density reading at 450 nm.