



Porcine pro-opiomelanocortin (POMC) ELISA kit-Quantitative sandwich

Cat. No.:	0126WXX-1447
Assay Type:	Quantitative sandwich ELISA
Target Species:	Porcine
Assay Target:	POMC
Size:	48T; 96T

This product is for research use only and is not intended for diagnostic use.

Product Overview

Description

Porcine pro-opiomelanocortin (POMC) ELISA kit-Quantitative sandwich is an ELISA-based *in vitro* research tool designed specifically for the quantitative detection of POMC in porcine samples with a range of 0.312-20 ng/mL and a minimum detectable dose (sensitivity) of 0.06 ng/mL. The kit is highly sensitive and easy to use.

Assay Principle

The ELISA analytical biochemical technique is based on POMC antibody-POMC antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect POMC antigen targets in samples.



Background

POMC, a highly complex precursor polypeptide belonging to the POMC family and encoded at chromosomal location 2p23.3, serves as a central hub in the endocrine regulation of energy homeostasis and systemic metabolism. Synthesized as a secreted protein that undergoes extensive peptide hormone processing, POMC is vital for the neuropeptide signaling pathways that govern appetite regulation, glucose homeostasis, and blood pressure. Its biological significance is underscored by its role in producing ACTH to stimulate adrenal cortisol release, as well as its essential binding activities at melanocortin receptors (MC3R and MC4R) to modulate feeding behavior. Crucially, genetic defects in POMC are directly linked to Pro-opiomelanocortin Deficiency (POMCD) and a heightened susceptibility to early-onset obesity—a condition defined by the excessive accumulation of body fat beyond physiological requirements. Beyond its primary metabolic functions, POMC influences diverse processes ranging from cellular pigmentation and neuropeptide transduction to the negative regulation of tumor necrosis factor production, highlighting its status as a pivotal molecular driver in the complex pathology of metabolic disorders.

Synonyms

POC; NPP; ProOMC; ACTH; Pro-OMC; Pro opiomelanocortin; Corticotropin-lipotropin; Corticotropin; Adrenocorticotrophic hormone; Proopiomelanocortin

Formula Weight

29,424 Da

Applications

Porcine pro-opiomelanocortin (POMC) ELISA kit-Quantitative sandwich is used to quantify POMC in serum, plasma, cell culture supernatant, organizations of porcine, providing data to support research in a wide range of areas, including endocrinology, obesity, and others.

Research Area

Endocrinology; Obesity

Specification

Sample Type

Porcine serum; Plasma; Cell culture supernatant; Organizations

Detection Range

0.312-20 ng/mL

Sensitivity

0.06 ng/mL

Precision (Intra-assay)

CV≤8%

Precision (Inter-assay)

CV≤12%

Cross-reactivity

No significant cross-reactivity or interference was observed.

Recovery

70-110%

Storage

Store at 2-8°C.