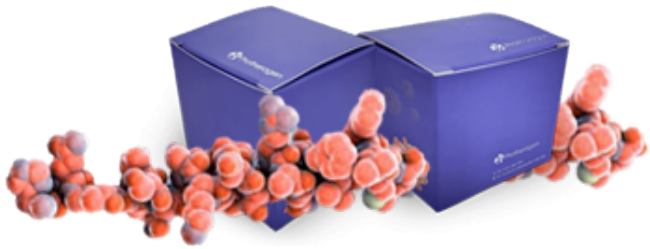
Protheragen Obesity



Mouse pro-opiomelanocortin (POMC) ELISA kit (0.391-25 ng/mL)

Cat. No.:	0126WXX-1443
Assay Type:	Quantitative sandwich ELISA
Target Species:	Mouse
Assay Target:	POMC
Size:	48T; 96T

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

Product Overview

Description	Mouse pro-opiomelanocortin (POMC) ELISA kit (0.391-25 ng/mL) is an ELISA-based < i>in vitro research tool designed specifically for the quantitative detectio n of POMC in mouse samples with a range of 0.391-25 ng/mL and a minimum detectab le dose (sensitivity) of 0.234 ng/mL. The kit is highly sensitive and easy to us e.
Assay Principle	This kit is based on sandwich ELISA technology. An anti-mouse POMC antibody is p re-coated onto 96-well plates. Standards, samples, and a biotin-conjugated anti- mouse POMC detection antibody are added to the wells and washed. Subsequently, H RP-streptavidin is introduced, and unbound conjugates are washed away. TMB subst rate is used to visualize the enzymatic reaction, producing a yellow color upon acidification. The density of the yellow signal is proportional to the concentra tion of mouse POMC captured in the plate, measured at 450 nm.

Address: 101-4 Colin Dr, Holbrook, NY 11741, USA
Phone: 1-631-506-1393
info@obesityscientific.com

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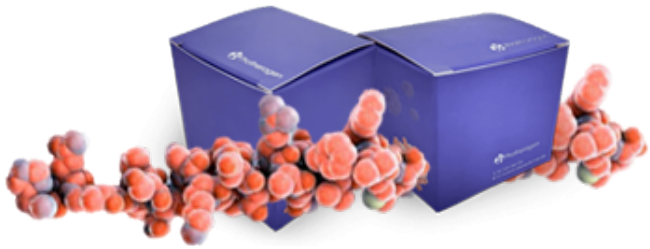

Background	POMC, a highly complex precursor polypeptide belonging to the POMC family and en coded at chromosomal location 2p23.3, serves as a central hub in the endocrine r egulation of energy homeostasis and systemic metabolism. Synthesized as a secret ed protein that undergoes extensive peptide hormone processing, POMC is vital fo r the neuropeptide signaling pathways that govern appetite regulation, glucose h omeostasis, and blood pressure. Its biological significance is underscored by it s role in producing ACTH to stimulate adrenal cortisol release, as well as its e ssential binding activities at melanocortin receptors (MC3R and MC4R) to modulat e feeding behavior. Crucially, genetic defects in POMC are directly linked to Pr o-opiomelanocortin Deficiency (POMCD) and a heightened susceptibility to early-o nset obesity—a condition defined by the excessive accumulation of body fat beyon d physiological requirements. Beyond its primary metabolic functions, POMC influ ences diverse processes ranging from cellular pigmentation and neuropeptide tran sduction to the negative regulation of tumor necrosis factor production, highlig hting its status as a pivotal molecular driver in the complex pathology of metab olic disorders.
Synonyms	POC; NPP; ProOMC; ACTH; Pro-OMC; Pro opiomelanocortin; Corticotropin-lipotropin; Corticotropin; Adrenocorticotropic hormone; Proopiomelanocortin
Formula Weight	29,424 Da
Applications	Mouse pro-opiomelanocortin (POMC) ELISA kit (0.391-25 ng/mL) is used to quantify POMC in serum, plasma, cell culture supernatant, cell or tissue lysate, and oth er liquid samples of mouse, providing data to support research in a wide range o f areas, including endocrinology, obesity, and others.
Research Area	Endocrinology; Obesity

Specification

Sample Type	Serum; Plasma; Cell culture supernatant; Cell or tissue lysate; Other liquid sam ples
Detection Range	0.391-25 ng/mL
Sensitivity	0.234 ng/mL
Cross-reactivity	No significant cross-reactivity or interference was observed.
Recovery	88-105%
Storage	Store at -20°C (microplate; standard) and 2-8°C (other reagents).

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