



Human uncoupling protein-1 (UCP1) ELISA kit (78-5000 pg/mL)

Cat. No.:	0126WXX-2039
Assay Type:	Quantitative sandwich ELISA
Target Species:	Human
Assay Target:	UCP1
Size:	48T; 96T

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

Product Overview

Description	Human uncoupling protein-1 (UCP1) ELISA kit (78-5000 pg/mL) is an ELISA-based <i>in vitro</i> research tool designed specifically for the quantitative detection of UCP1 in human samples with a range of 78-5000 pg/mL and a minimum detectable dose (sensitivity) of 28 pg/mL. The kit is highly sensitive and easy to use.
Assay Principle	The ELISA analytical biochemical technique is based on UCP1 antibody-UCP1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect UCP1 antigen targets in samples.
Background	Uncoupling protein 1 (UCP1) is a mitochondrial transporter that mediates proton leakage across the inner mitochondrial membrane, uncoupling oxidative phosphorylation from ATP synthesis and dissipating energy as heat. UCP1 plays a key role in brown adipose tissue thermogenesis and energy expenditure, contributing to the regulation of whole-body metabolism. Impaired UCP1 function can reduce thermogenic capacity and promote energy storage, linking it to obesity and related metabolic disorders.
Synonyms	SLC25A7; UCP; Thermogenin; Solute carrier family 25 member 7; Uncoupling Protein 1; Mitochondrial; Mitochondrial brown fat uncoupling protein 1
Formula Weight	33,005 Da
Applications	Human uncoupling protein-1 (UCP1) ELISA kit (78-5000 pg/mL) is used to quantify UCP1 in human samples, providing data to support research in a wide range of areas, including signal transduction, obesity, and others.



Research Area Signal transduction; Obesity

Specification

Sample Type	Human samples
Detection Range	78-5000 pg/mL
Sensitivity	28 pg/mL
Precision (Intra-assay)	CV≤5.6%
Precision (Inter-assay)	CV≤8.5%
Cross-reactivity	No significant cross-reactivity or interference was observed.
Recovery	1
Storage	Store at -20°C.