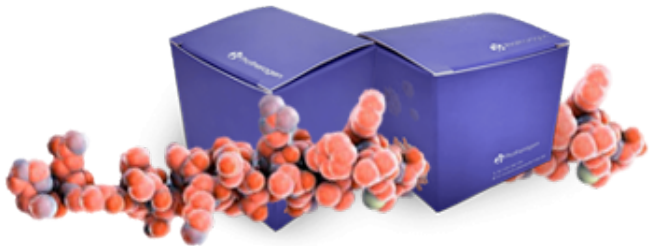
Protheragen
Obesity



Human alpha-ketoglutarate-dependent dioxygenase (FTO) ELISA kit (0.25-8 ng/mL)

Cat. No.:	0126WXX-32
Assay Type:	Quantitative sandwich ELISA
Target Species:	Human
Assay Target:	FTO
Size:	48T; 96T

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

Product Overview

Description	Human alpha-ketoglutarate-dependent dioxygenase (FTO) ELISA kit (0.25-8 ng/mL) i s an ELISA-based *in vitro* research tool designed specifically for the qua ntitative detection of FTO in human samples with a range of 0.25-8 ng/mL and a m inimum detectable dose (sensitivity) of 0.1 ng/mL. The kit is highly sensitive a nd easy to use.
Assay Principle	The ELISA analytical biochemical technique is based on FTO antibody-FTO antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect FTO antigen targets in samples.

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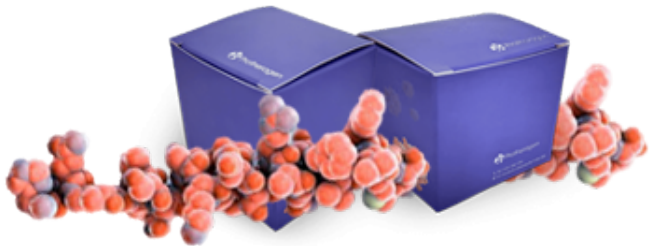

Background	FTO is a crucial dioxygenase primarily responsible for repairing alkylated DNA a nd RNA through oxidative demethylation. It exhibits the highest activity toward single-stranded RNA containing 3-methyluracil and requires molecular oxygen, α-k etoglutarate, and iron as cofactors. Beyond its role in nucleic acid repair, FTO participates in regulating systemic metabolic rate, energy expenditure, and ene rgy homeostasis, thereby influencing body composition and adipose tissue accumul ation. Defects in this protein are associated with various disorders, including growth retardation, developmental delays, and premature mortality. The relations hip between FTO and obesity represents a highly significant research area, given that FTO is currently one of the strongest known genetic associates of obesity. Research indicates that FTO influences body weight by regulating energy balance and fat accumulation. Its mechanisms involve modulating appetite and satiety si gnaling pathways, as well as influencing lipolysis and lipogenesis processes. Sp ecific FTO gene variants have been demonstrated to be significantly associated w ith higher BMI and obesity risk.
Synonyms	GDFD; IFEX9; ALKBH9; BMIQ14; KIAA1752; Fat mass and obesity-associated protein; FTO, alpha-ketoglutarate dependent dioxygenase; EC 1.14.11.-
EC NO.	1.14.11.-
Formula Weight	12,218 Da
Applications	Human alpha-ketoglutarate-dependent dioxygenase (FTO) ELISA kit (0.25-8 ng/mL) i s used to quantify FTO in human samples, providing data to support research in a wide range of areas, including enzyme & kinase, obesity, and others.
Research Area	Enzyme & kinase; Obesity

Specification

Sample Type	Human samples
Detection Range	0.25-8 ng/mL
Sensitivity	0.1 ng/mL
Precision (Intra-assay)	CV<15%
Precision (Inter-assay)	CV<15%
Cross-reactivity	No significant cross-reactivity or interference was observed.
Storage	Store at 2-8°C.

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