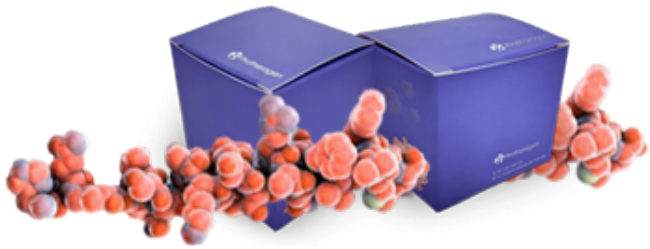
Protheragen Obesity



Rat tartrate-resistant acid phosphatase 5b (TRACP 5b) ELISA kit (0.5-16 U/L)

Cat. No.:	0126WXX-2000
Assay Type:	Quantitative sandwich ELISA
Target Species:	Rat
Assay Target:	TRACP 5b
Size:	48T; 96T

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

Product Overview

Description	Rat tartrate-resistant acid phosphatase 5b (TRACP 5b) ELISA kit (0.5-16 U/L) is an ELISA-based *in vitro* research tool designed specifically for the quant itative detection of TRACP 5b in rat samples with a range of 0.5-16 U/L and a mi nimum detectable dose (sensitivity) of 0.1 U/L. The kit is highly sensitive and easy to use.
Assay Principle	The ELISA analytical biochemical technique is based on TRACP 5b antibody-TRACP 5 b antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect TRACP 5b antigen targets in samples.
Background	TRACP 5B, a metallophosphoesterase located at 19p13.2, encodes a tartrate-resist ant acid phosphatase (EC 3.1.3.2) essential for bone resorption and the negative regulation of inflammatory cytokines, including TNF and interleukin-1 beta. By dephosphorylating osteopontin and bone sialoprotein, it maintains skeletal integ rity and immune homeostasis; consequently, inactivating mutations lead to SPENCD I, while its elevated expression serves as a biomarker for various leukemias and Gaucher disease. In the context of metabolic health, TRACP 5B is increasingly r ecognized for its role in obesity-driven chronic inflammation, as its regulation of osteopontin signaling and macrophage activity directly influences the adipos e tissue remodeling and systemic insulin resistance associated with excessive we ight gain.
Synonyms	ACP5; TRAP5b; SPENCDI; TRACP-5b

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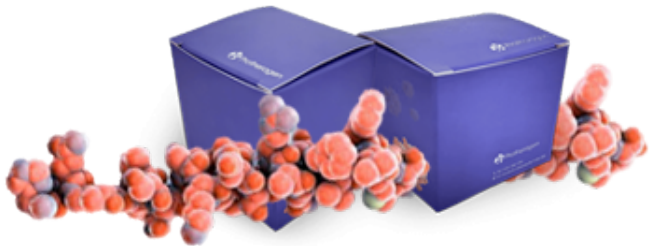

Formula Weight	36,599 Da
Applications	Rat tartrate-resistant acid phosphatase 5b (TRACP 5b) ELISA kit (0.5-16 U/L) is used to quantify TRACP 5b in body fluids and tissue homogenates of rats, providi ng data to support research in a wide range of areas, including signal transduct ion, metabolism, obesity, and others.
Research Area	Signal transduction; Metabolism; Obesity

Specification

Sample Type	Body fluids; Tissue homogenates
Detection Range	0.5-16 U/L
Sensitivity	0.1 U/L
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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