PROTEOSTAT® Thioredoxin-1 assay kit

The PROTEOSTAT® Thioredoxin-1 assay kit provides a simple, homogenous assay for screening modulators of Trx-1 enzymatic activity in microplates. This is accomplished by monitoring the Trx-1 catalyzed reduction of insulin in the presence of Dithiothreitol (DTT), resulting in the formation of insulin aggregates which then bind avidly to the red-emitting fluorogenic PROTEOSTAT® Trx-1 detection dye. The fluorescence-based assay provides a vastly improved assay signal window, improved lower detection limit, and superior Z'-score (>0.8) relative to turbidity measurements. Intra-plate and inter-plate CVs using this assay are typically 3-6%. Human recombinant thioredoxin-1 enzyme and the thioredoxin inhibitor, aurothiomalate, are included in the kit, as well as all reagents necessary for monitoring changes in Trx-1 activity. The PROTEOSTAT® Thioredoxin-1 assay kit is capable of providing a quantitative readout of Trx-1 enzymatic activity in a robust and high-throughput fashion and can be applied to identification of Trx-1 inhibitors from chemical libraries.

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Ordering Information

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ENZ-51033-KP002	2x96 wells

Manuals, SDS & CofA

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Handling & Storage

Use/Stability	Upon receipt, store the Thioredoxin-1 at -80°C. Store the remaing reagents at ≤-20°C protected from light.
Handling	Protect from light. Avoid freeze/thaw cycles.
Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	Fluorescent detection
Application Notes	This kit provides a simple, homogenous assay for screening modulators of Thioredoxin-1 enzymatic activity.
Contents	PROTEOSTAT® PDI detection reagent: 20 µL Thioredoxin-1 (human) (recombinant): 2 vials x 80 µL Insulin: 2 vials x 1.8 µmol Aurothiomalate (inhibitor): 2 vials x 25 nmol PBE buffer: 25 mL Stop reagent: 1 mL DTT: 2 vials x 1.3 mL Deionized water: 5 mL
Quality Control	Using the procedure described in the manual, a sample from each lot of PROTEOSTAT® Thioredoxin-1 assay kit is used to assay the following: (1) Insulin with Trx-1; (2) Insulin without Trx-1; and (3) Insulin with Trx-1 and Aurothiomalate. The Z'-factor is greater than 0.8. Trx-1 is inhibited by at least 50% with Aurothiomalate.
UniProt ID	P10599

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