CREATIVE BIOMART®
Assay Kit

Transglutaminase Inhibitor Screening Assay Kit

Product Information

Cat

Kit-2277

Cat.No.

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Product Overview

Transglutaminases (TGs) are enzymes that catalyze post-translational modifications of glutamine residues in proteins, via the formation of isopeptide bonds, esterification and deamination. The reaction produces insoluble macromolecular complexes and protein aggregates. Within the TG family of enzyme, tissue-specific Transglutaminase-2 (TG2) expression is proven to be a clinical target for multiple types of cancer and neurodegenerative diseases, including Alzheimer's and Huntington's diseases.Inhibition of TG2, with a Cystamine-derived drug candidate (currently in phase-II clinical trial for Huntington's disease), has shown to have neuroprotective effects in models of neurodegeneration. Further, TG2 interacts with retinoblastoma protein (Rb), GTPase, and protein kinases through serine/threonine phosphorylation in cancer. Therefore, TG2 is a clinical validated candidate in these pathological diseases, and is a highly relevant therapeutic biomarker. Transglutaminase Inhibitor Screening Assay Kit utilizes the catalytic activity of TG2, in a deamidation reaction between donor and acceptor substrates, to generate a hydroxamate product. The stop solution reacts with the hydroxamate product, forming a purple complex that can be measured at 525 nm.In the presence of TG2 inhibitor, the enzyme loses its ability to catalyze the deamidation reaction, leading to a decrease in color development and a lower absorbance OD reading. This assay kit is simple and can be used to identify and characterize TG2 inhibitors in a high-throughput format.

Applications

Screening/studying/characterizing Transglutaminase inhibitors.

Storage

-20°C

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Transglutaminase Inhibitor Screening Assay Kit

Shipping	
Gel Pack	
Size	
100 assays	
Kit Components	
TG Assay Buffer; 1 M DTT; Donor Substrate (lyophilized); Acceptor Substrate (lyophilized); Stop Solution; Transglutaminase-2 Enzyme (lyophilized); Inhibitor Cystamine (lyophilized)	
Detection method	Absorbance (525 nm)
Features & Benefits	
Simple method to screen Transglutaminase inhibitors; High-throughput Compatible; Includes Cystamine, an Inhibitor Control	

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