

Background

LifeSensors's diubiquitin substrates represent a new class of substrates for the continuous fluorescent measurement of true isopeptidase activity. The C-terminus of wild type ubiquitin is conjugated via an isopeptide bond to lysine11, 48, or 63 of a second ubiquitin molecule with the resultant diubiquitin forming an internally quenched fluorescent FRET pair (IQF). Each ubiquitin is labeled with a single molecule of either a fluorescent reporter (i.e. TAMRA) or a highly efficient quenching dye. Cleavage of the IQF DiUb by deubiquitylases leads to separation of the fluorophore from quencher and subsequent increase in observed fluorescence.

The ubiquitin-TAMRA reference standard can be used to optimize and calibrate the performance of individual plate readers (or fluorometers) for measurement of the rates of hydrolysis of our IQF-DiUb by DUBs

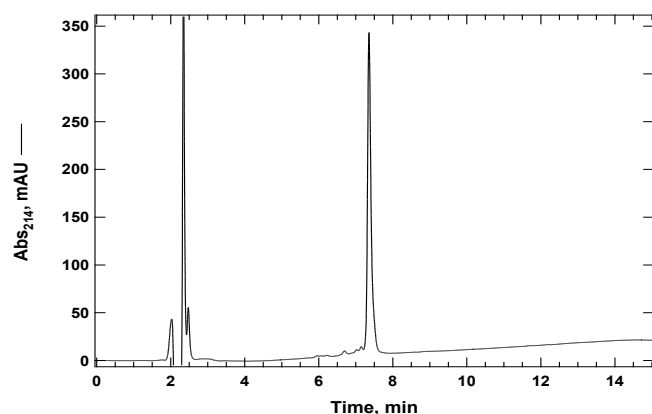
Application(s)

- Determine optimal filter, gain, and attenuation parameters for achieving maximal signal to background ratios for IQF-DiUb substrates
- Determine calibration curves for converting RFU to molar concentrations

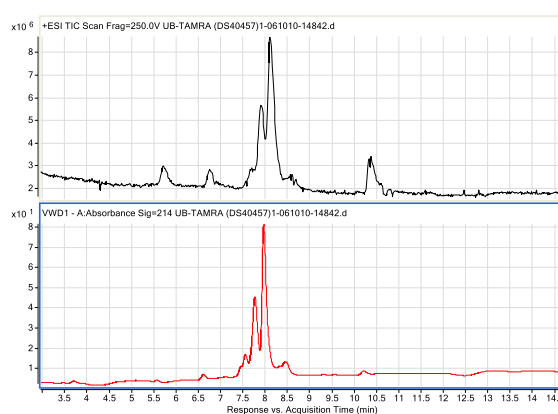
Product Specifications

Purity	≥ 90% by RP-HPLC
Molecular Weight	9,161.5/9179.5 Da
Quantity	25µg at 40µM
Species	Human
Expression System	<i>E. coli</i>
Physical State	Liquid
Buffer	50 mM Mes, pH 6.0
Stability & Storage	4° C

Product QC



LC-MS



RP-HPLC

All products are for research use only • Not intended for human or animal diagnostic or therapeutic uses
Copyright © 2025 LifeSensors, Inc. All Rights Reserved