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Protocol for Emulate Organ-Chips:

GSH-Glo™ Glutathione Assay

May 10, 2019

EP159 v1.0

TITLE GSH-Glo™ Glutathione Assay	DOCUMENT EP159	VERSION 1.0
	DATE 10-MAY-2019	PAGE 2 OF 2

Goals:	Key Steps:	Other Required Materials:
Quantify total glutathione (GSH) levels from Emulate Organ-Chip cell lysate samples	<ul style="list-style-type: none"> • Prepare all reagents, samples, and standards • Run the assay • Read plate 	<ul style="list-style-type: none"> • GSH-Glo™ Glutathione Assay (Promega #V6911) • Distilled or deionized water • PBS • White, opaque polystyrene flat-bottom 96- or 384-well plates • Luminescence plate reader

Introduction

The GSH-Glo™ Assay is a luminescent-based assay for the detection and quantification of glutathione (GSH), an antioxidant that can prevent damage to cellular components caused by reactive oxygen species such as free radicals, peroxides, and lipid peroxides. GSH is involved in the detoxification of both xenobiotic and endogenous compounds. A change in GSH levels can be used as an indicator of toxicity.

Method

Sample type	Organ-Chip cell lysate See Emulate Protocol EP135 Cell Lysis for Protein Analysis.
Recommended assay flow rate (Liver-Chip)	30 µL / h
Recommended cell lysate dilution (Liver-Chip)	No dilution: Samples are loaded neat. Note: Sample dilution may need to be adjusted further to accommodate for any experimental modifications by the end-user.
Run assay as described on supplier site	https://www.promega.com/products/cell-health-assays/oxidative-stress-assays/gsh_glo-glutathione-assay/?catNum=V6911

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