emulate

Protocol for Emulate Organ-Chips

Keratin 18 (K18) Assay

April 7, 2019

EP146 v1.0

Goals:	Key Steps:	Other Required Materials:
Quantification of released soluble keratin 18 (K18) from Organ-Chip effluent samples	• Prepare all reagents, samples, and standards • Run assay • Read plate	• M65 EpiDeath® CK18 Kit (DiaPharma Cat No. P10040) • Plate reader

1. Background

Keratin 18 (K18) is an intracellular protein expressed at high levels by many types of epithelial cells. During cell death, the cellular content of soluble K18 will be released into the extracellular compartment. The M65 EpiDeath® ELISA measures soluble keratin 18 (K18) (cytokeratin 18 [CK18]) released from dying cells and can be used in the research of overall cell death (due to apoptosis and necrosis) of epithelial cells.

2. Method

Sample type	Organ-Chip effluent See Protocol EP124 Effluent Sampling.
Recommended assay flow rate (Liver-Chip)	30 µL / h
Recommended effluent 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 user.
Run assay as described on supplier site	https://diapharma.com/product/ck18-biomarkers-others/m65-epideath-elisa/ Note: Store kit at 2–8°C immediately upon receipt. Do not freeze.
Sample concentration range (Liver-Chip)	500–1200 U / L