emulate

Protocol for Emulate Organ-Chips:

Isolation and Purification of RNA Samples

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EP216 v1.0

TITLE	DOCUMENT	VERSION
Isolation and Purification of RNA Samples	EP216	1.0
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Goals:	Key Steps:	Other Required Materials:
Isolate the nucleic acid fraction and remove genomic DNA from samples that are being processed for RNA analysis	• Isolate the nucleic acid fraction using TRI Reagent® compatible columns • Run the reaction and remove genomic DNA • Measure the absorbance at 260 and 280 nm to assess the concentration and purity of the samples	• Direct-zol™ RNA MicroPrep (Zymo Research, Cat #: R2060) • TURBO DNA-freeTM Kit (Thermo Fisher Scientific, Cat #: AM1907) • Hot plate • 1.5 mL RNAase free Eppendorf tubes • P2–P1000 pipettes and tips • Microtiter plate reader

Introduction

This is the method for isolation and purification of the total RNA for the epithelial and endothelial cells of the Colon Intestine-Chip. For isolation and purification of customer originated cell material, this protocol might need to be optimized. Please reach out to Emulate Field Science Support for additional guidance.

Method

Sample type	Organ-Chip epithelial or endothelial cells lysates in TRI Reagent® See Emulate Protocol Cell Lysis for RNA isolation
Recommended assay flow rate (Colon Intestine-Chip)	30 µL/h
Run assay as per manufacturer instructions	https://www.zymoresearch.com/collections/direct-zol-rna-kits/products/direct-zol-rna-microprep-kits https://www.thermofisher.com/order/catalog/product/AM1907#/AM1907 Note: Store kit at 4°C or -20°C, as indicated by the manufacturer, immediately upon receipt.