



Endothelium-on-a-Chip

Assessing blood cell adhesion to cultured endothelial cells

About

MIMICKING IN VIVO CONDITIONS

Provide more physiologically relevant environment compared to protein functionalized assays

ENDOTHELIAL CELL TYPE AND SOURCE

Any type of primary human endothelial cells can be cultured under physiologic flow and activated via disease-specific pro-inflammatory agents

PATIENT SPECIFIC ACTIVATION

Cultured endothelial cells can be activated via patients' own blood and/or blood products

SAMPLE

Whole blood or isolated RBCs, WBCs, and platelets

Highlights

TARGETED THERAPIES

Drugs that target RBC sickling/deformability (e.g., Voxelotor) in SCD

CURATIVE THERAPIES

NHLBI-supported multi-site study to assess RBC mediated microcapillary occlusions before and after a gene-based therapy for curative intent (1).

1. <https://curesickle.org>

Typical Uses

- ✓ CLINICAL ASSAY
- ✓ PERSONALIZED MEDICINE
- ✓ RESEARCH
- ✓ DRUG DEVELOPMENT

Single Cell Analysis

ASSESSMENT OF ANTI-ADHESION THERAPY

