

# JoVE 實驗百科全書- Colorectal Cancer 直腸癌

試用期間：9/9-12/31

資源連線：ERMG> 資料庫

資源介紹：提供影片方式百科全書，Colorectal Cancer 直腸癌包含 21 個影片，重點介紹用於研究結直腸癌的研究方法。該合集介紹與篩查測試、遺傳分析、腸道微生物組研究、治療干預、動物模型生成、檢測技術以及細胞行為和轉移反應相關的一些結直腸癌基礎研究技術。

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**Encyclopedia of Experiments**  
**Colorectal Cancer**

Colorectal cancer originates within the colon or rectal regions of organisms. This collection highlights some fundamental research techniques in colorectal cancer relating to screening tests, genetic analysis, studies on the gut microbiome, therapeutic interventions, animal model generation, assay techniques, and cell behavior & metastatic responses.

**Assays & techniques**

- Tumor Enzymatic Digestion**  
A Procedure to Generate Tumor Cell Suspension from Patient-derived Xenograft Cancer Mouse Models
- Laser Microdissection**  
A Technique to Isolate Invading Colorectal Cancer cells from a 3D Organotypic Culture Model
- Cytoskeleton and Focal Adhesion Organization Assay**  
An Immunofluorescence-based Method to Study Cell Adhesion and Spreading on Substrates
- Spheroid Generation from Cell Lines**  
A Three-Dimensional (3D) Cell Culture Method
- Microtubule Binding Assay in CRC Cells**  
A Method to Examine Microtubule Binding Tau Protein in Colorectal Cancer Cells
- CRC Organoid Culture**  
A Method to Obtain 3D Organoids from Colorectal Cancer Cells
- Traction Cytometry Assay**  
A Method to Quantify Traction Force Exerted by Cancer
- CTC Isolation from a Whole Blood Sample**  
A Method to Obtain CTCs from Murine Colorectal Cancer

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**Assays & techniques**

- CRC Organoid Cell Labeling**  
A Method to Generate GFP Lentivirus-transduced Colorectal Cancer Organoid Cells
- Circulating miRNA Extraction**  
A Method to Isolate miRNA from Plasma Samples Via Organic Extraction and Small RNA Enrichment
- ROS Detection with DCFH-DA Staining**  
Measuring Total ROS in Colorectal Cancer Cell Lines
- Assessing DNA Damage Foci**  
To Identify Radiation-Induced DNA Damage Foci in Cancer Cell Line Using Immunofluorescence Staining
- Stool Microbial DNA Isolation**  
Studying the Effect of Environmental Enrichment on Microbiome Diversity in Murine Tumor Model
- Phosphatase Assay in CRC Cells**  
A Method to Examine the Phosphorylation Status of Tau Protein in Colorectal Cancer Cells

**Animal model studies**

- Intracecal Tumor Cell Injection**  
A Technique to Deliver Cancer Cells for Establishing Orthotopic Colorectal Cancer Mouse Model
- Segmental Adeno-Cre Infection**  
A Technique to Generate Isolated Colorectal Cancer using Genetically Engineered Mouse Models
- Pretargeted Radioimmunotherapy**  
A Method for Targeted Delivery of Therapeutic Radionuclides to Tumors
- Establishing Experimental Metastases Mouse Model**  
Implanting GFP Expressing CRC Organoid Cells in PDX Model to Detect Micrometastases