The Epithelial-Mesenchymal Transition Generates Cells with Properties of Stem Cells

Tumor metastasis is a hallmark of cancer, and understanding the mechanisms underlying metastatic processes is crucial for developing effective therapeutic strategies. The epithelial-mesenchymal transition (EMT) is a key developmental program that drives cancer invasion and metastasis. EMT is characterized by the loss of epithelial cell-cell adhesion, acquisition of mesenchymal properties, and increased migratory and invasive capacities.

Recent Research News

Human occludin is a hepatitis C virus entry factor required for infection of mouse cells

Occludin (OCLN) is a transmembrane protein expressed in various tissues, including the liver. It is a component of tight junction complexes, which are essential for maintaining barriers in various epithelial tissues. In this study, the authors investigated the role of occludin in the entry of hepatitis C virus (HCV) into cells.

C-Hepatitis C virus (HCV) is a significant public health concern, with millions of people globally infected. Understanding the viral entry mechanism is crucial for developing effective antiviral therapies. Previous studies have suggested that occludin plays a role in HCV entry. In this study, the authors used a high-throughput screening approach to identify occludin as a critical receptor for HCV entry.

The results showed that occludin is required for efficient HCV infection of mouse cells. This finding is significant because it suggests that targeting occludin could be a potential strategy for developing antiviral therapies against HCV.

The study used a combination of genetic and biochemical approaches to confirm the role of occludin in HCV entry. They observed that siRNA knockdown of occludin significantly reduced HCV infection in mouse cells.

These findings highlight the importance of occludin in the HCV entry process and suggest that occludin could be a novel therapeutic target for HCV infection.