

# **The Study of SIAH1 in Oral Squamous Cell Carcinoma**

## **Abstract**

SIAH1 is a tumor suppressor which regulates cell biological processes. Previous studies were shown that SIAH1 involves in ubiquitination and proteasomal degradation leading to reducing tumor growth and cell apoptosis. Previously, we assessed 10 samples from the individual OSCC patients by using the genome-wide array comparative genomic hybridization (aCGH). It showed that SIAH1 located at chromosome 16q12-q13 is DNA copy number amplification. In this study, we intent to exam the mechanism of SIAH1 in the Oral Squamous Cell Carcinoma (OSCC). In this study, we used six OCSS cell lines and the normal human skin cell line, HSF is a normal controlled cell line. By using Immunocytochemistry analysis, SIAH1 protein was lower expression in HSF but higher expression in the nucleoplasm to others. In addition, we analyzed the expression of SIAH1 mRNA level in OSCC cell lines and clinical samples by Q-PCR. The result indicates that the expression of SIAH1 mRNA in CA922 and OEEM1 were higher than other cell lines. In advanced, we transfected with five different SIAH1 shRNA into CA922 cells. After 24 hours and 48 hours we detected SIAH1 mRNA by Q-PCR expression and cell growth by MTT assay and cell count. It showed that SIAH1 shRNA was effective to knockdown SIAH1 mRNA and inhibited cell growth. Our studies show molecular mechanism of SIAH1 is involved in OSCC tumor progression.