

# The E3 ubiquitin ligase *Siah1* is a prosurvival factor overexpressed in oral cancer

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## Abstract

**Background/Aim.** This study aimed at investigating the expression and functional significance of *Siah1*, an E3 ubiquitin ligase, in oral squamous cell carcinoma (OSCC).

**Materials and Methods.** Comparative genomic hybridization and real-time PCR were performed to examine the amplification of *Siah1* gene in clinical specimens of OSCC tissues. Expression of *Siah1* mRNA and protein was examined by quantitative RT-PCR and immunohistochemistry assays, respectively. Apoptosis was examined by Annexin V-staining and PARP-cleavage with or without siRNA-mediated *Siah1* knockdown.

**Results.** Levels of *Siah1* DNA and mRNA significantly increased in clinical OSCC specimens and in cultured OSCC cells, which also stained positive for *Siah1* protein. Knockdown of *Siah1* led to growth suppression and apoptosis induction in a p53-independent mechanism.

**Conclusion.** These results revealed a tight correlation of *Siah1* overexpression with OSCC and suggest an oncogenic role of *Siah1* in oral cancer.