

## عنوان مقاله:

Role of Brg1 in progression of esophageal squamous cell carcinoma

## محل انتشار:

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## خلاصه مقاله:

Objective(s): Epigenetic regulation of gene expression can be carried out through chromatin remodeling enzymes such as SWI/SNF. Brg1 also known as SMARCA4 is a catalytic subunit of SWI/SNF, which is necessary for MMPs expression. Matrix metalloproteinases (MMPs) are known as important player enzymes during tumor progression and metastasis. Aberrant epigenetic modification of chromatin should be precisely clarified to reveal probable unknown pathways in ESCC progression. Probable role of Brg1 in ESCC tumorigenesis and metastasis was studied through the assessment of Brg1 mRNA expression in KYSE30, and further evaluation about the biology of Brg1 was performed through the Brg1 silencing. Materials and Methods: Level of Brg1 mRNA expression in KYSE30 was compared to normal tissues using the real time polymerase chain reaction (PCR). Moreover, KYSE30 cells were transfected with Brg1-siRNA to silence the Brg1. Results: Our results showed for the first time that Brg1 mRNA expression was increased in KYSE30 cell line (ESCC cell line) compared with normal esophageal tissue of ESCC patients. Rate of transfection in KYSE30 was also between 40 to 50%, using the pSilencer-Brg1shRNA (1:1 ratio). Conclusion: Our data indicated that chromatin remodeling machinery is a novel aspect in tumor biology of ESCC, and overexpression of Brg1 as an important member of SWI/SNF might be involved in the migration and invasion of ESCC tumoral cells.

## کلمات کلیدی:

Brg1, ESCC, MMPs, Metastasis

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