

Cell Cycle Arrest by a Natural Product via G2/M Checkpoint

Sharon Chui-Wah Luk, Stephanie Wing-Fai Siu, Chun-Kit Lai, Ying-Jye Wu, Shiu-Fun Pang

Technology Development, CK Life Sciences Int'l Inc., 2 Dai Fu Street, Tai Po Industrial Estate, Hong Kong, China

Abstract :

CKBM is a natural product that exhibits a novel anti-tumor activity through the induction of cell cycle arrest and apoptosis. We have investigated its effects on cell cycle regulation using a gastric cancer cell line, AGS. The effects of CKBM on cell proliferation, cell cycle regulation and apoptosis were analyzed using BrdU (5-bromo-2'-deoxyuridine) cell proliferation assay and flow cytometric analysis, respectively. Specific cellular protein expressions were measured using Western blot analysis. Flow cytometric analysis indicated that CKBM induced G2/M cell cycle arrest and apoptosis, whereas differential protein expressions of p21, p53 and 14-3-3? (stratifin) using Western blot analysis were enhanced. The differential expressions of p21, p53 and 14-3-3? in AGS cancer cells after CKBM treatment may play critical roles in the G2/M cell cycle arrest that blocks cell proliferation and induces apoptosis.

Key Word :

14-3-3? (stratifin), G2/M arrest, cell proliferation, checkpoint protein

Volume 2, Number 2, - 2005, ISSN 1449-1907