

**Name of Journal:** *World Journal of Gastrointestinal Oncology*

**Manuscript NO:** 68218

**Manuscript Type:** ORIGINAL ARTICLE

*Basic Study*

**STAT3-mediated activation of mitochondrial pathway contributes to antitumor effect of dihydrotanshinone I in esophageal squamous carcinoma cells**

Qi MM *et al.* DHTS exerts antitumor effect in ESCC

Ming-Ming Qi, Peng-Zhan He, Lan Zhang, Wei-Guo Dong

**Abstract**

BACKGROUND

Esophageal squamous cell carcinoma (ESCC) is one of the most common malignancies

### Match Overview

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## Suppression of autophagy augments the radiosensitizing ...

<https://www.researchgate.net/publication/265649731...>

The STAT3 signaling **pathway** is known to serve a role in radioresistance in numerous types of cancer, including **squamous** cell **carcinoma** and head and neck **carcinoma** (52), and similar results have ...

## STATs in cancer inflammation and immunity: A leading role ...

<https://www.researchgate.net/publication/38030869>

A subcutaneous tumor-bearing model of Balb/c mice with Hep-2 **cells** of laryngeal **carcinoma** was established to observe the inhibitory **effect** of BR on laryngeal cancer **cells** in vivo.

**Estimated Reading Time:** 9 mins

## Disruption of STAT3-DNMT1 interaction by SH-I-14 induces ...

<https://www.researchgate.net/publication/276060292...>

Although only 10-15% of the tumor **cells** are transfected in vivo, the Stat3beta-induced **antitumor effect** is associated with massive apoptosis of B16 tumor **cells**, indicative of a potent bystander ...

**Estimated Reading Time:** 7 mins

## Celastrol Induces Mitochondria-Mediated Apoptosis in ...

<https://www.researchgate.net/publication/272077810...>

Celastrol-induced apoptosis in human nasopharyngeal **carcinoma** is associated with the **activation** of the death receptor and the **mitochondrial pathway** ... an **anti-tumor effect** on HCC in vitro and in ...

## Roles of IFN-γ in tumor progression and regression: a ...

<https://biomarkerres.biomedcentral.com/articles/10.1186/s40364-020-00228-x> ▼



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### [STAT3, the Challenge for Chemotherapeutic and ...](#)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7564975>

Aug 30, 2020 · Interestingly, **STAT3 $\beta$**  expression is correlated with overall survival and recurrence-free survival in **esophageal squamous cell carcinoma (ESCC)** patients with or without chemoradiotherapy and sensitizes tumor xenografts to chemotherapy (cisplatin and 5-FU) mainly by blocking the transcriptional activity of **STAT3 $\alpha$** . Taken together, these findings indicated that **STAT3 $\beta$**  is a potential ...

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Author: Ping-Lian Yang, Lu-Xin Liu, Lu-Xin Liu, E...

Publish Year: 2020

### [20848 - Gene ResultStat3 signal transducer and activator ...](#)

<https://www.ncbi.nlm.nih.gov/gene/20848>

Jun 23, 2021 · Chimeric G-CSF Receptor-Mediated **STAT3 Activation** **Contributes** to Efficient Induction of Cardiomyocytes from Mouse Induced Pluripotent Stem Cells. *Antrodia cinnamomea* induces **anti-tumor** activity by inhibiting the **STAT3 signaling pathway** in lung cancer cells. The loss of **STAT3** in mature osteoclasts has detrimental effects on bone structure.

#### PEOPLE ALSO ASK

What is the role of **STAT3** signaling in cancer? ▾How does G-CSF receptor mediated **STAT3** activation work? ▾Where does the activation of **STAT3** take place? ▾What causes differential expression of the **STAT3** gene? ▾[Feedback](#)

### [6774 - Gene ResultSTAT3 signal transducer and activator of ...](#)

<https://www.ncbi.nlm.nih.gov/gene/6774>

The protein encoded by this gene is a member of the **STAT** protein family. In response to cytokines and growth factors, **STAT** family members are phosphorylated by the receptor associated kinases, and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. This protein is activated through phosphorylation in response to various cytokines and ...

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Author: Ping-Lian Yang, Lu-Xin Liu, Lu-Xin Liu, En-M...

Publish Year: 2020

## [\[Small interfering RNA suppression of transducer and ...](#)

<https://pubmed.ncbi.nlm.nih.gov/17822622>

[Small interfering RNA suppression of transducer and activator of transcription 3 (STAT3) signaling pathway: inhibitory effect on proliferation of human **esophageal squamous carcinoma cells**] Zhonghua Bing Li Xue Za Zhi .

### PEOPLE ALSO ASK

What is the role of STAT3 signaling in cancer? ▾

Where does the activation of STAT3 take place? ▾

How is STAT3 phosphorylated in a neoplastic cell? ▾

How are STAT3 and JAK3 involved in B cell differentiation? ▾

Feedback

## [Targeting the STAT3 signaling pathway in cancer: Role of ...](#)

<https://www.sciencedirect.com/science/article/pii/S0304419X13000644>

Apr 01, 2014 · There was a negative correlation between the expression intensity of phosphorylated **STAT3** and that of tumor suppressor gene **E-cadherin** in human cutaneous **squamous cell carcinoma** (SCC). The **activation** of **STAT3** was closely related to the invasive potential of SCC, whereas **E-cadherin** suppression contributed to the invasive and metastatic behavior of malignant tumor **cells**. Mucin-like ...

Cited by: 587

Author: Kodappully Sivaraman Siveen, Sakshi Sikka...