Docket #: S11-143A

HCC Cell Line

Researchers in Dr. Dean Felsher's lab have generated a murine hepatocellular carcinoma (HCC) cell line with controllable MYC expression. HCC is one of the most common and incurable malignancies. It is strongly associated with hepatitis B and hepatitis C virus infection, which leads to the activation of oncogenes including MYC. MYC is highly involved in tumorigenesis and thus inactivation of MYC may provide an effective therapy for HCC. To further investigate the role of MYC in HCC the inventors generated this cell line; MYC-induced HCC murine cell line 3-4. This cell line is derived from LAP-tTA/TRE-MYC transgenic mice, a previously generated transgenic model of MYC-induced HCC using the Tet-system. With this cell line, doxycycline can be used to suppress MYC expression and thus it provides a useful tool for investigations into MYC regulation.

Stage of research
The inventors have used the cell line to investigate the regulation of MYC and its role in HCC.

Applications

- Research studies

Advantages

- MYC expression can be controlled

Publications

- Cao Z, Fan-Minogue H, Bellovin DI, Yevtodiyenko A, Arzeno J, Yang Q, Gambhir SS, Felsher DW. MYC phosphorylation, activation, and tumorigenic potential in

hepatocellular carcinoma are regulated by HMG-CoA reductase. Cancer Res. 2011 Mar 15;71(6):2286-97. doi: 10.1158/0008-5472.CAN-10-3367. Epub 2011 Jan 24.

Innovators

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