Thyroid hormone promotes β-catenin activation and cell proliferation in colorectal cancer

Yee-Shin Lee¹, Yu-Tang Chin^{2,3}, Ya-Jung Shih^{2,3}, André Wendindondé Nana¹, Yi-Ru Chen^{2,3}, Han-Chung Wu⁴, Yu-Chen SH Yang⁵, Hung-Yun Lin^{2,3*}, and Paul J. Davis^{6,7}

¹Ph.D. Program for Cancer Biology and Drug Discovery, College of Medical Science and Technology, Taipei Medical University and Academia Sinica, Taipei, Taiwan

²Ph.D. Program for Cancer Biology and Drug Discovery, College of Medical Science and Technology, Taipei Medical University, Taipei, Taiwan

³Taipei Cancer Center, Taipei Medical University, Taipei, Taiwan

⁴Institute of Cellular and Organismic Biology, Academia Sinica, Taipei, Taiwan

⁵Joint Biobank, Office of Human Research, Taipei Medical University, Taipei, Taiwan

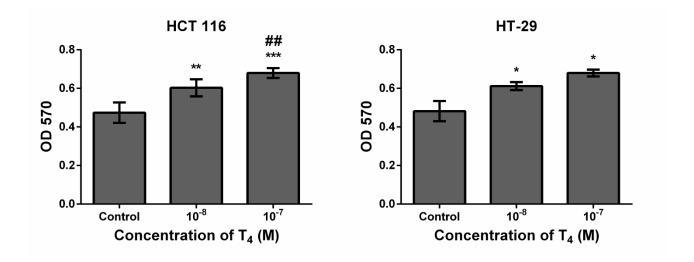
⁶Pharmaceutical Research Institute, Albany College of Pharmacy and Health Sciences, Albany,

NY, USA

⁷Albany Medical College, Albany, NY, USA

*Corresponding Author

E-mail: linhy@tmu.edu.tw



Supplementary Fig. 1

Thyroid hormone T₄ promotes cell proliferation in colorectal cancer cell lines HCT 116 and HT-29. Cells treated with/without T₄ were evaluated after 48 hr using MTT assay, with absorbance at 570 nm. Data represent at least three independent experiments performed in replicates and are presented as mean \pm sd (HCT 116 n=5; HT-29 n=3). * $P \le 0.05$, ** $P \le 0.01$ and *** $P \le 0.001$ compared to the control group. *# $P \le 0.01$ compared to the T₄ (10⁻⁸ M) group

Supplementary Materials and Methods

3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium Bromide (MTT) Assay

The human colorectal cancer cell lines were seeded onto 96-well plates (10³ cells per well). After the indicated time periods, the treated cells were incubated with fresh medium containing 1 mg/ml of MTT (Sigma-Aldrich, St. Louis, MO, USA) at 37 °C for 4 hr. Resulting formazan crystals were dissolved in dimethyl sulfoxide and plates were read using VersaMax ELISA Microplate Reader (Molecular Devices, Sunnyvale, CA, USA) with absorbance at 570 nm.