Supporting Information

Combinative treatment of β-elemene and cetuximab is sensitive to KRAS mutant colorectal cancer cells by inducing ferroptosis and inhibiting epithelial-mesenchymal transformation

Peng Chen^{1, 2, 3, †}, Xuejie Li^{4, †}, Ruonan Zhang^{2, 3}, Shuiping Liu^{2, 3}, Yu Xiang^{2, 3}, Mingming Zhang^{2, 3}, Xiaying Chen^{2, 3}, Ting Pan^{2, 3}, Lili Yan^{2, 3}, Jiao Feng^{2, 3}, Ting Duan^{2, 3}, Da Wang⁶, Bi Chen^{2, 3}, Ting Jin^{2, 3}, Wengang Wang^{2, 3}, Liuxi Chen^{2, 3}, Xingxing Huang^{2, 3}, Wenzheng Zhang^{2, 3}, Yitian Sun^{2, 3}, Guohua Li^{2, 3}, Lingpan Kong^{2, 3}, Xiaohui Chen⁵, Yongqiang Li^{2, 3}, Zuyi Yang⁵, Qin Zhang^{2, 3}, Lvjia Zhuo^{2, 3}, Xinbing Sui^{2, 3, *}, Tian Xie^{1, 2, 3, *}

[†]These authors contributed equally to this work

¹Institute of Chinese Materia Medica, Shanghai University of Traditional Chinese Medicine, Shanghai 201203, China

²Holistic Integrative Pharmacy Institutes and Department of Medical Oncology, The Affiliated Hospital of Hangzhou Normal University, College of Medicine, Hangzhou Normal University, Hangzhou, Zhejiang, China

³Key Laboratory of Elemene Class Anti-cancer Chinese Medicine of Zhejiang Province, Hangzhou Normal University, Hangzhou, Zhejiang, China

⁴Department of Pathology, The First Affiliated Hospital of Medical School of Zhejiang University, Hangzhou, China

⁵Department of Hematology and Oncology, the Affiliated Hospital of Hangzhou Normal University, College of Medicine, Hangzhou Normal University, Hangzhou, Zhejiang, China

⁶Department of Colorectal Surgery, The Second Affiliated Hospital of Zhejiang University School of Medicine, Hangzhou, China

*Correspondence to: Tian Xie, Email: xbs@hznu.edu.cn or Xinbing Sui, Email: hzzju@zju.edu.cn

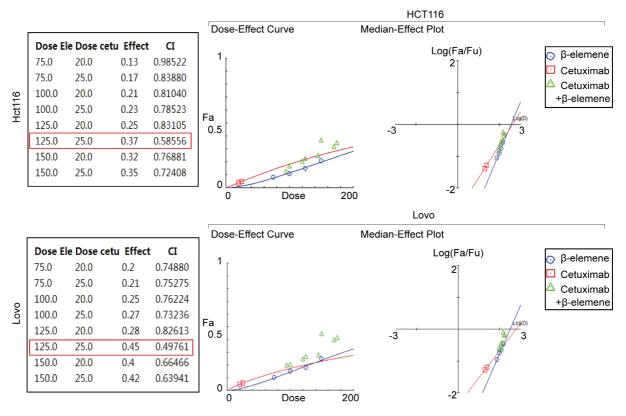


Figure S1. The optimum concentration of the combination of β -elemene and cetuximab. The best synergetic effect was obtained when 125 µg/ml β -elemene was combined with 25 µg/ml cetuximab for 24 h, which is determined by CCK-8 and software Compusyn.

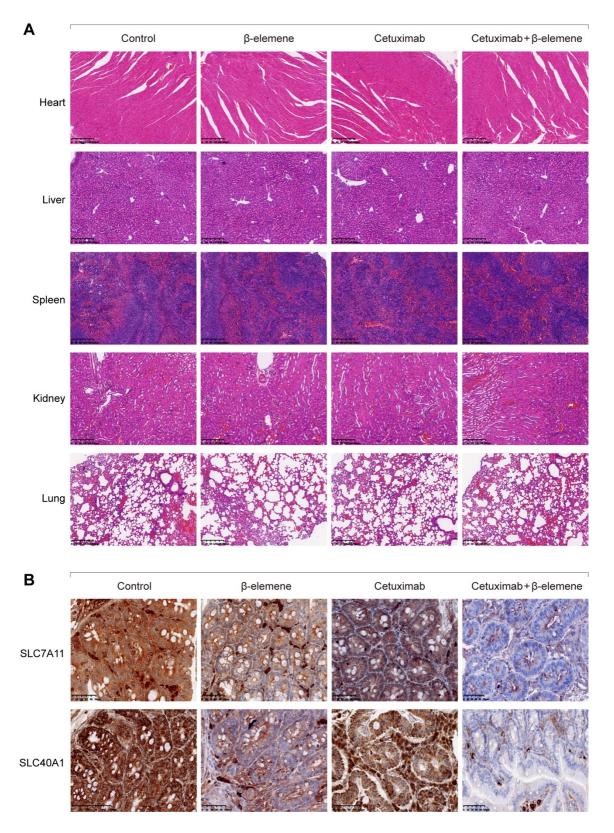


Figure S2. H&E and immunohistochemical staining for orthotopic xenograft tumor sections. (A) H&E staining of major organs was analyzed three days after the last injection of β -elemene (original magnification: × 100). (B) Immunohistochemistry staining of several ferroptotic proteins (SLC7A11 and SLC40A1) (original magnification: × 100).