Upregulation of histone-lysine methyltransferases plays a causal role in hexavalent chromium-induced cancer stem cell-like property and cell transformation

Zhishan Wang, Jianjun Wu, Brock Humphries, Kazuya Kondo, Yiguo Jiang, Xianglin Shi, and Chengfeng Yang

Table of Contents

Supplementary Figure 1 (Fig. S1). Representative images of soft agar colony formation by chronic low dose Cr(VI) exposure-transformed BEAS-2B and 16HBE cells.

Supplementary Figure 2 (Fig. S2). Representative images of suspension culture sphere formation by chronic low dose Cr(VI) exposure-transformed BEAS-2B and 16HBE cells.

Supplementary Figure 3 (Fig. S3). The growth curve and images of tumors produced by inoculation of Cr(VI)-transformed BEAS-2B cells in nude mice.

BEAS-2B-Cr(VI)



BEAS-2B Control



16HBE-Control

16HBE-Cr(VI)



Fig. S1. Representative images of soft agar colony formation by chronic low dose Cr(VI) exposure-transformed BEAS-2B and 16HBE cells. After exposure to 0.25 μ M of Cr(VI) (K₂Cr₂O₇) for 20 (BEAS-2B) or 40 (16HBE) weeks, passage-matched control and Cr(VI)-exposed cells were used for soft agar colony formation assay as described in Methods.



Fig. S2. Representative images of suspension culture sphere formation by chronic low dose Cr(VI) exposure-transformed BEAS-2B and 16HBE cells. After exposure to $0.25 \ \mu$ M of Cr(VI) (K₂Cr₂O₇) for 20 (BEAS-2B) or 40 (16HBE) weeks, passage-matched control and Cr(VI)-exposed cells were used for suspension culture sphere formation assay as described in Methods.





Fig. S3. The growth curve and images of tumors produced by inoculation of Cr(VI)-transformed BEAS-2B cells in nude mice. Passage-matched control cells and Cr(VI)-transformed BEAS-2B cells (1.5 × 10⁶) suspended in 50 µl of PBS were mixed with equal volume of growth factor reduced Matrigel and injected subcutaneously into the right flank of nude mouse. No tumor formation was observed from injection of passagematched control cells. Tumor growth from injection of Cr(VI)-transformed cells was monitored daily and measured weekly. Mice were sacrificed 14 weeks after injection. (*A*) Tumor growth curve (mean \pm SD, n=4). (*B*) Images of tumors produced from injecting Cr(VI)transformed BEAS-2B cells.