Figure S1. DS epimerase activity is increased in biopsies from esophageal carcinoma and gastric adenocarcinoma patients.

Patient data are given in Supplementary Table I.
Figure S2. Adhesion and stress fiber organization of control shRNA cells and DS-epi1 shRNA cells.

A, representative digital holographic images of control and DS-epi1 down-regulated cells. Lines represent the automatically drawn cellular contour. B, calculated cell areas from the images shown in (A). Filled and empty circles, two control clones; filled and empty triangles, two DS-epi1-shRNA-a clones. Data are shown as mean ± SD from two experiments, each involving counting of 500 cells in 20 microscopic fields (* p < 0.05, ** p < 0.01). C, cells migrating in the wound scratch area in the presence of HGF (50 ng/ml) were stained for actin filaments by phalloidin. White arrow-heads indicate stress fibers. Scale bars, 10 μm.
Figure S3. The expression pattern of CS/DS biosynthetic enzymes is similar in 37 patients with gastroesophageal cancers.

Unsupervised cluster analysis of mRNA expression of CS/DS biosynthetic enzymes in biopsies from gastroesophageal carcinoma versus a reference pool of 10 human cancer cell lines, which gives a broad representation of transcripts. Therefore, the values do not represent a comparison between cancer and normal tissues. ESCC, esophageal adenocarcinoma, and gastric adenocarcinoma follow the same expression pattern with, most notably, increased levels of DS-epi1 and 6-O-sulfotransferases, and decreased levels of 4-O-sulfotransferases. Red represents up-regulation, with graded intensities; green down-regulation; black similar expression, and grey data not available.