Figure S1. Transfection efficiency of pcDNA3.1-GRINA plasmid in LoVo cells. GRINA (A) mRNA and (B) protein expression levels were determined by reverse transcription-quantitative PCR and western blotting. **P<0.01 vs. NC plasmid. GRINA, glutamate receptor, ionotropic, N-methyl D-aspartate-associated protein 1; NC, negative control; OE, overexpression.
Table SI. Clinical characteristics of patients with colorectal cancer.

| Clinical characteristic          | Case, n (%) |
|----------------------------------|------------|
| Age, years                       |            |
| <60                              | 52 (32.3)  |
| ≥60                              | 109 (67.7) |
| Sex                              |            |
| Male                             | 80 (49.7)  |
| Female                           | 81 (50.3)  |
| T stage                          |            |
| T1 and T2                        | 52 (32.2)  |
| T3 and T4                        | 109 (67.7) |
| Lymphatic invasion               |            |
| Absent                           | 77 (47.8)  |
| Present                          | 84 (52.2)  |
| Differentiation                  |            |
| Well                             | 35 (21.7)  |
| Moderate                         | 70 (43.5)  |
| Poor                             | 56 (34.8)  |
| TNM stage                        |            |
| I                                | 20 (12.4)  |
| II                               | 57 (35.4)  |
| III                              | 84 (52.2)  |
| Tumor location                   |            |
| Colon                            | 73 (45.3)  |
| Rectum                           | 88 (54.7)  |
Table SII. Sequences of shRNAs used in the present study.

| shRNA | Sequence (5’→3’) |
|-------|------------------|
| shGRINA F: GGUUGCUGUACAAAGCCTT | R: GUGCUUUGUACGCAAACCTT |
| shNC F: UUCUCGAACGUGUACGUTT | R: ACGUGACACGUAUCGGAAT |

shRNA, short hairpin RNA; F, forward; R, reverse; NC, negative control; GRINA, glutamate receptor, ionotropic, N-methyl D-aspartate-associated protein 1.