Supplementary Fig S1

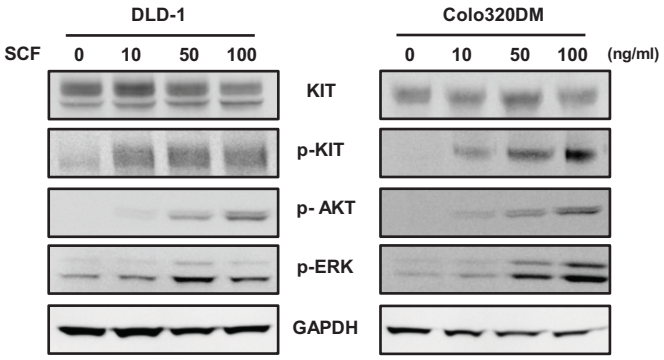

Figure S1. Expression of p-KIT, p-AKT, and p-ERK increased according to the increased SCF concentration in two KIT-expressing cell lines. Western blotting was performed 10 minutes after SCF treatment.

Supplementary Fig S2

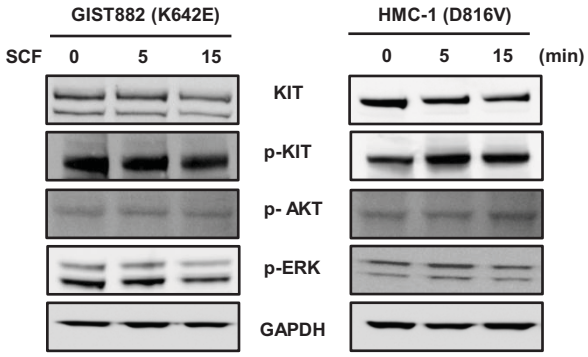

Figure S2. Expression of KIT, p-KIT, p-AKT, and p-ERK after SCF treatment in two tumor cell lines with *KIT* mutation. In contrast to the CRC cell lines with WT-KIT expression, no expressional changes of KIT, p-KIT, p-AKT, and p-ERK after SCF treatment were noted.

Supplementary Fig S3

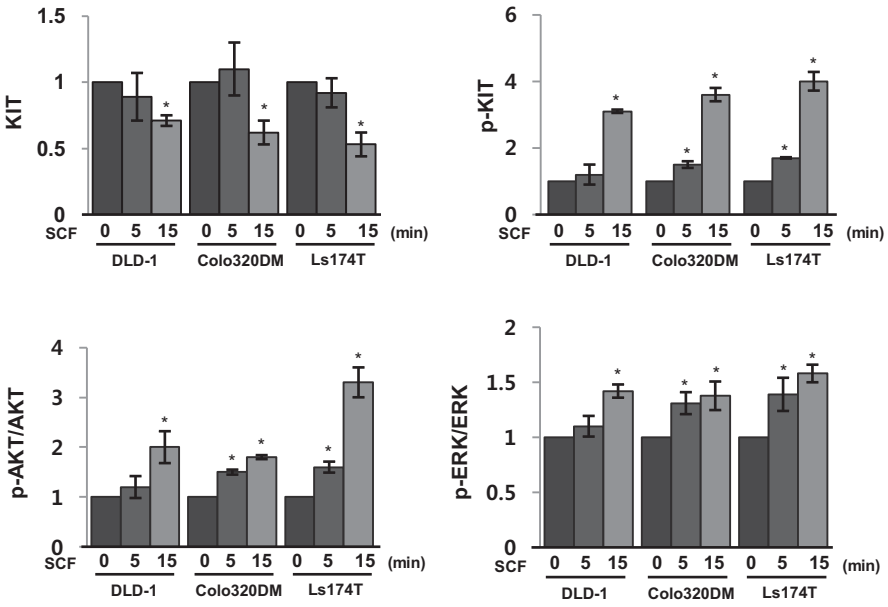

Figure S3. Quantification of Western blotting results for KIT, p-KIT, p-AKT, and p-ERK at 5 and 15 minutes after SCF treatment, as illustrated in Fig. 1E. Significant increases in p-KIT, p-AKT, and p-ERK were evident after SCF treatment. In contrast, the level of KIT protein decreased 15 minutes after SCF treatment. Data are shown as mean ± standard deviation (SD; n=3, *P < .05, Student's t –test)

Supplementary Fig S4

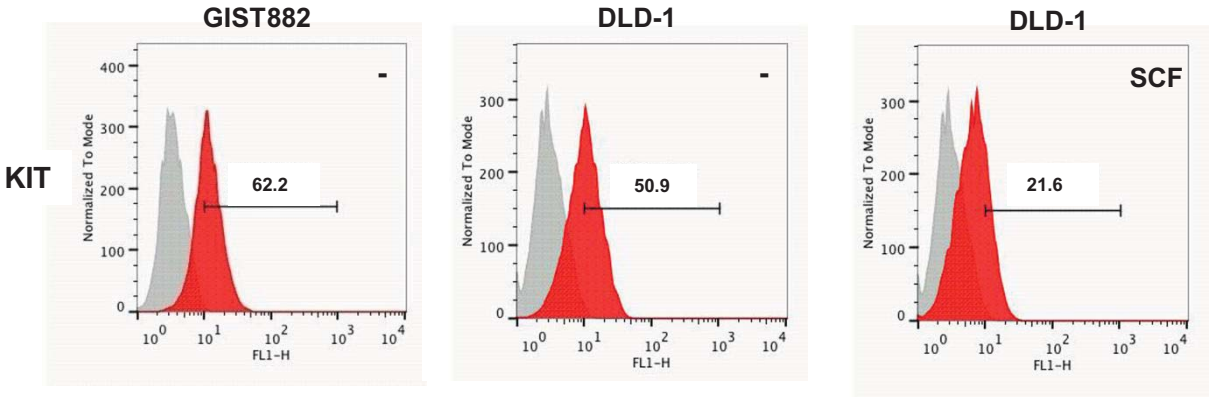

Figure S4. Membranous KIT expression of DLD-1 was determined by FACS. The number of cells with membranous expression of KIT decreased after SCF treatment for 60 minutes. Numbers above the lines indicate percent of cells positive for KIT in a DLD-1 cell population. The red histograms represent the intensity of KIT expression and the gray histograms indicate the unstained controls. GIST 882 cells were used as a positive control.

Supplementary Fig S5

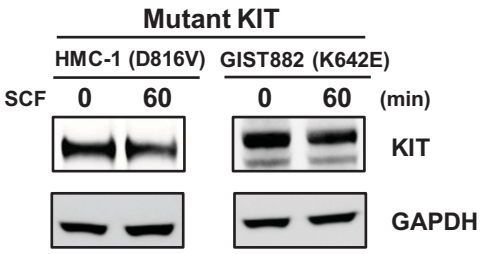

Figure S5. Mutant KIT is not degraded after SCF treatment. Cells with mutant KIT expression (HMC-1 and GIST882) were treated with SCF for 60 minutes and KIT expression level was analyzed by Western blotting. In contrast to the decreased expression of KIT after SCF treatment in the three colon cancer cell lines with WT-KIT expression, no changes in KIT expression were observed in the two cell lines with mutant KIT expression.

Supplementary Fig S6

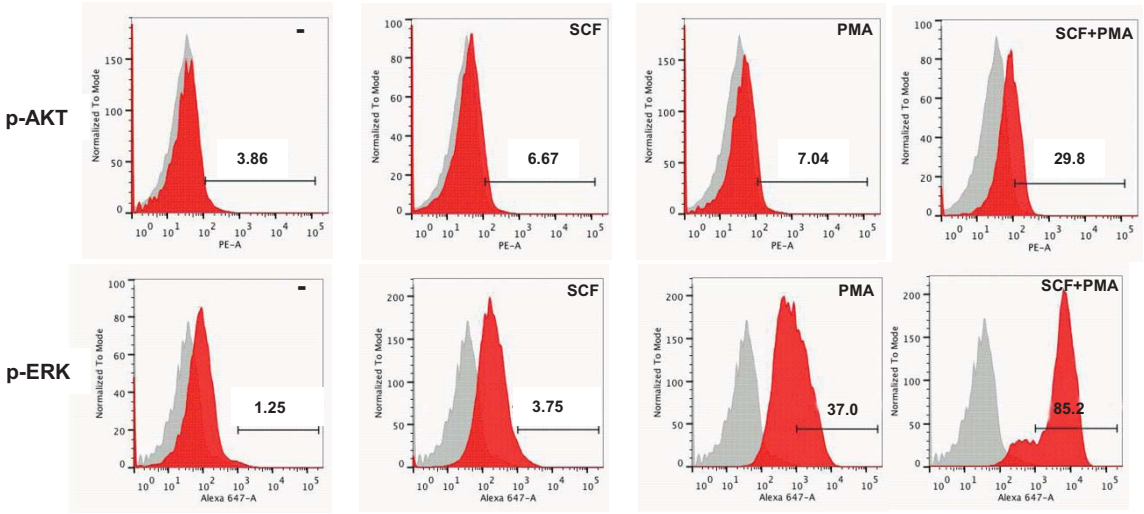

Figure S6. FACS analysis of p-AKT and p-ERK expressing colon cancer cells treated with SCF and PMA. Colo320DM cells were treated with SCF or PMA alone and concomitantly treated with SCF and PMA for 2 hours. The proportions of cells expressing p-AKT or p-ERK were analyzed by FACS. Numbers above the lines indicate percent of cells positive for p-AKT or p-ERK. The red histograms represent the intensity of p-AKT or p-ERK expression and the gray histograms indicate the unstained controls.

Supplementary Fig S7

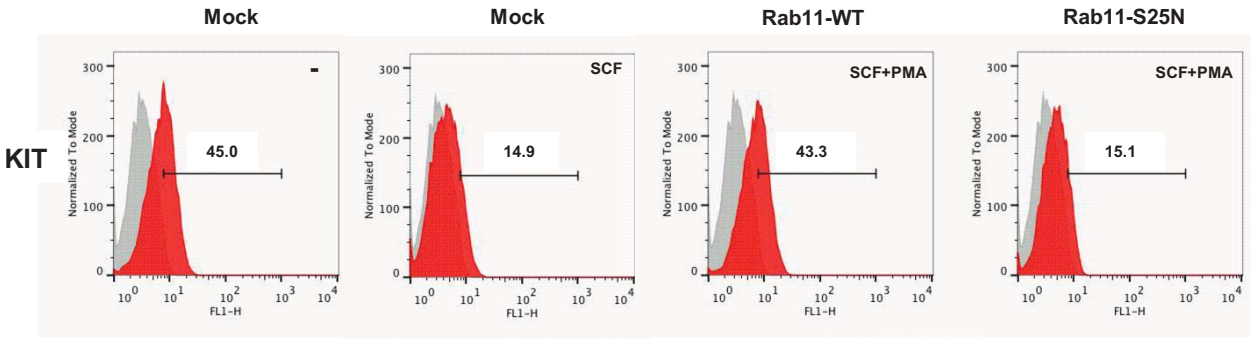

Figure S7. FACS analysis of KIT expression in the DLD-1 cells transfected with wild-type (Rab11-WT) or dominant-negative mutant form of Rab11 (Rab11-S25N). Expression of the mutant Rab11 (Rab11-S25N) resulted in the inhibition of KIT recycling after SCF and PMA treatment.

Supplementary Fig S8

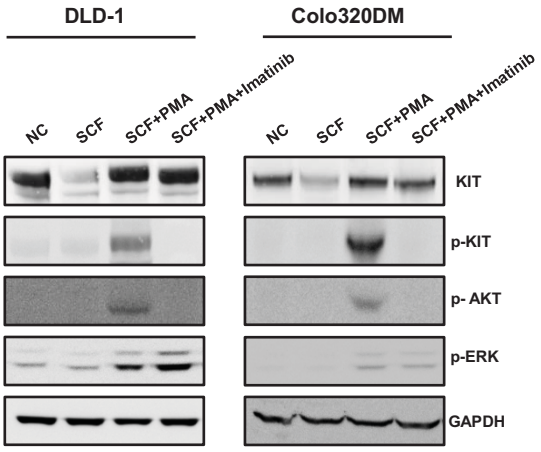

Figure S8. Effects of imatinib on CRC cells expressing KIT. Expressions of p-KIT, p-AKT, and p-ERK increased with SCF and PMA treatment, whereas imatinib inhibited the expressions of p-KIT and p-AKT in DLD-1 and Colo320DM cell s. No change in p-ERK was detected after imatinib treatment.

Supplementary Fig S9

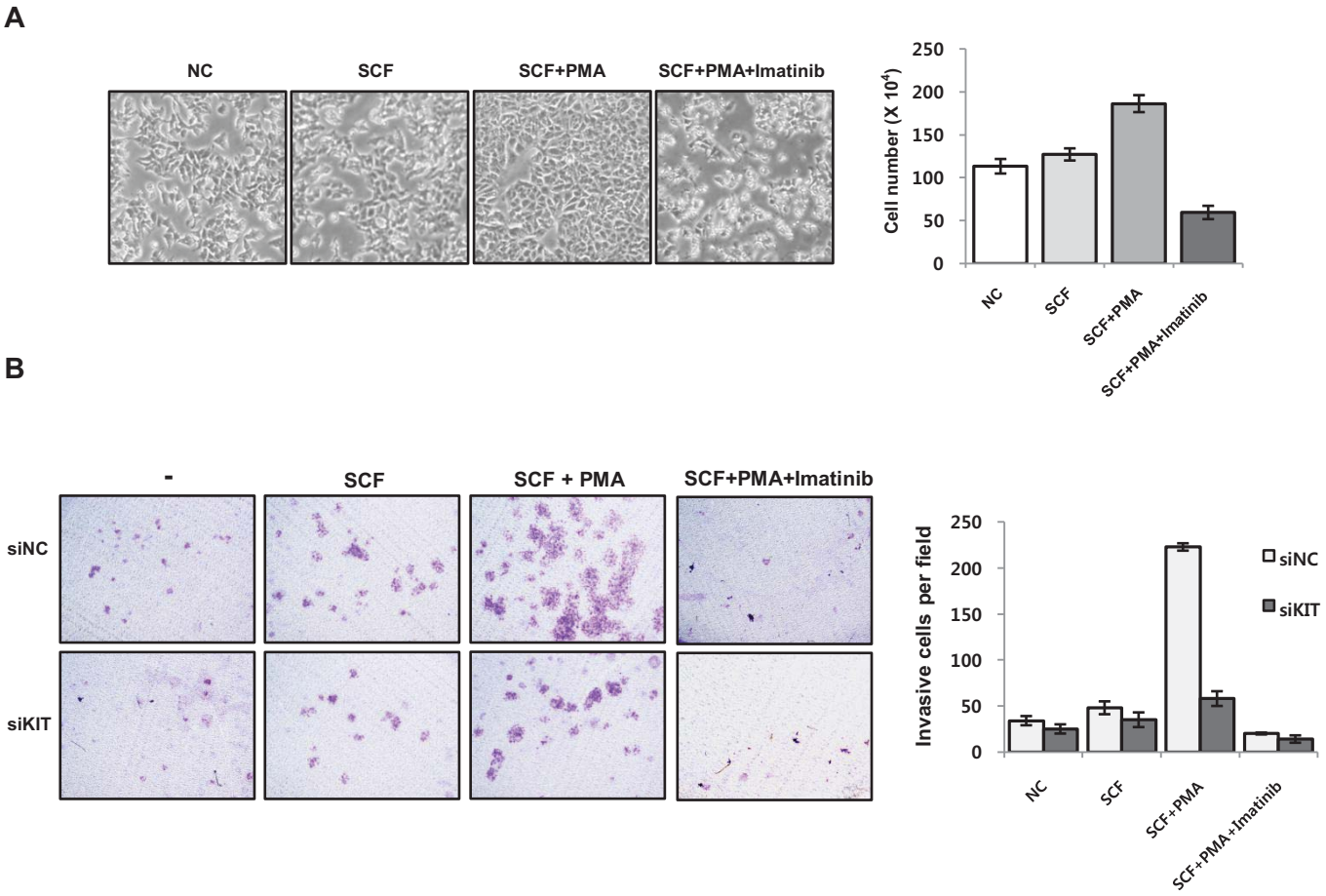

Figure S9. A, Morphology and number of DLD-1 cells after treatment of SCF alone or concomitant treatment of SCF and PMA in the presence or absence of imatinib. After 3 days, DLD-1 cell numbers increased with concomitant treatment of SCF and PMA, but decreased after imatinib treatment. B, Invasion assay of DLD-1 cells with or without *KIT* knockdown. DLD-1 cells were transfected with *siNC* or *siKIT* and subjected to invasion assay after treatment with SCF alone or concomitant treatment with SCF and PMA in the presence or absence of imatinib. In the cells without KIT knock down, concomitant treatment of SCF and PMA induced enhanced invasion of DLD-1 cells, whereas imatinib inhibited the invasion of tumor cells. Cells treated with *siKIT* showed no changes regardless of SCF and PMA treatment, and showed very little invasion.

Supplementary Fig S10

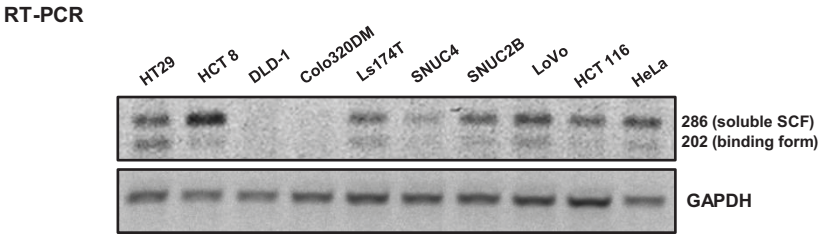

Figure S10. Expression of *SCF* mRNA expression in CRC cell lines. Soluble (286bp) and membrane bound *SCF* (202bp) mRNA expression were analyzed by RT-PCR in nine CRC cell lines and HeLa cell. GAPDH was used as a loading control.

Supplementary Fig S11

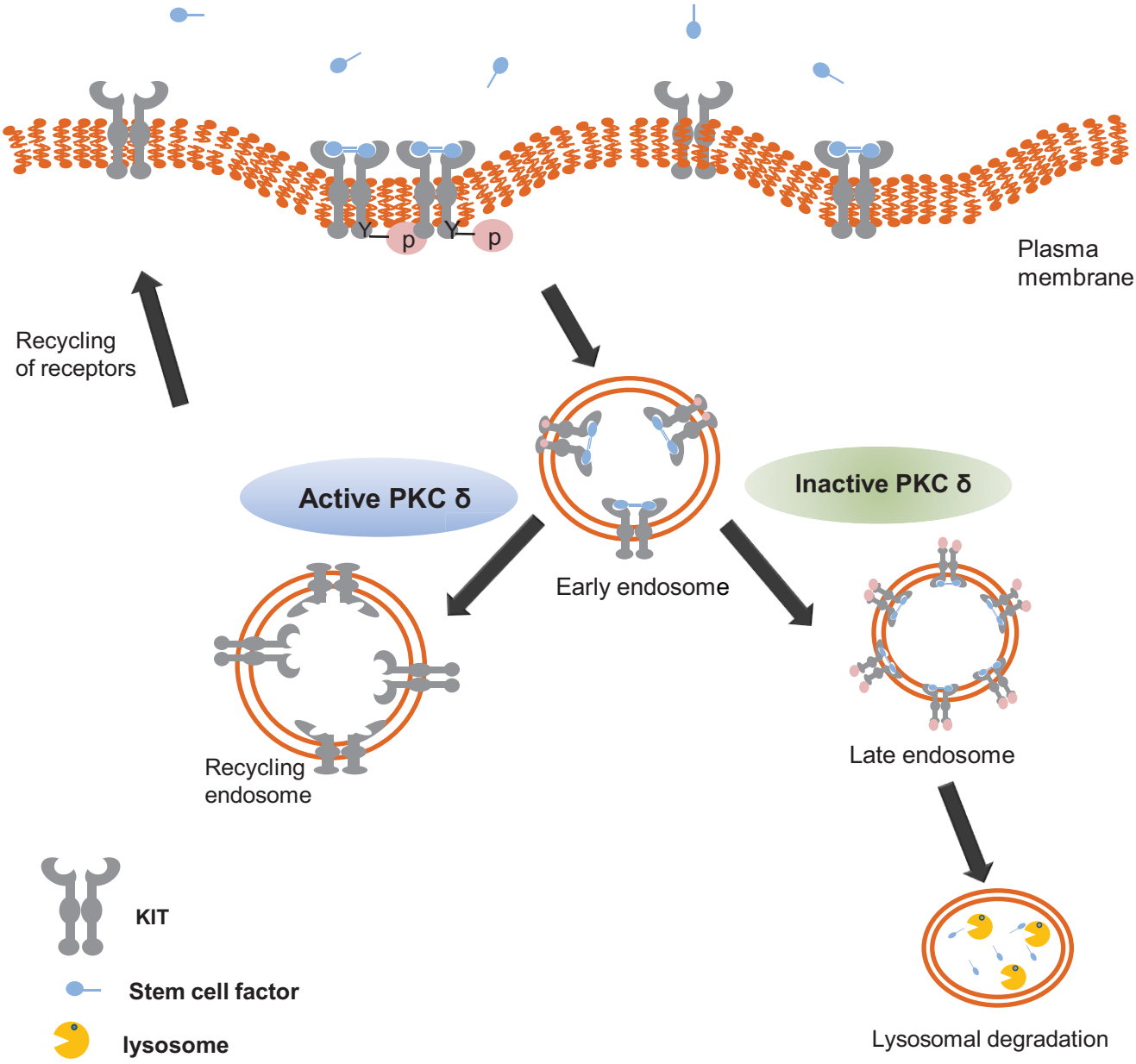

Figure S11. Colon cancers expressing WT-KIT constantly generated activated KIT-SCF signaling as a result of KIT recycling in a condition of endogenous PKC-δ activation.