

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: In vivo imaging of the mouse small intestine expressing FRET biosensor for ERK. This movie shows the spontaneous firing and propagation of ERK activity. Maximum projection of 16 z-sections spanning a total of 30 μm . Scale bars, 50 μm . Time shown in minutes:seconds.

File Name: Supplementary Movie 2

Description: Spontaneous ERK activation in an intestinal organoid. Maximum projection of 30 z-sections spanning a total of 38 μm . Scale bars, 50 μm . Time shown in minutes:seconds.

File Name: Supplementary Movie 3

Description: Lateral propagation of ERK activity in an intestinal organoid. Organoids were cultured in EGF-starved condition for 24 h before the imaging. Maximum projection of 28 z-sections spanning a total of 108 μm . Scale bars, 50 μm . Time shown in minutes:seconds.

File Name: Supplementary Data 1

Description: A list of CHIR99021-dependent upregulated and downregulated genes. Genes, whose protein products have been shown to regulate EGFR functions, are highlighted in orange.