

## Supplementary Information

### **Necrotic cells influence migration and invasion of glioblastoma via NF- $\kappa$ B/AP-1-mediated IL-8 regulation**

So-Hee Ahn<sup>1, 2</sup>, Hyunju Park<sup>1, 2</sup>, Young-Ho Ahn<sup>2, 3</sup>, Sewha Kim<sup>4</sup>, Min-Sun Cho<sup>4</sup>, Jihee Lee Kang<sup>1, 2</sup>, Youn-Hee Choi<sup>1, 2\*</sup>

<sup>1</sup>Department of Physiology, <sup>2</sup>Tissue Injury Defense Research Center, <sup>3</sup>Department of Molecular Medicine, <sup>4</sup>Department of Pathology Ewha Womans University School of Medicine, Seoul 911-1, Korea.

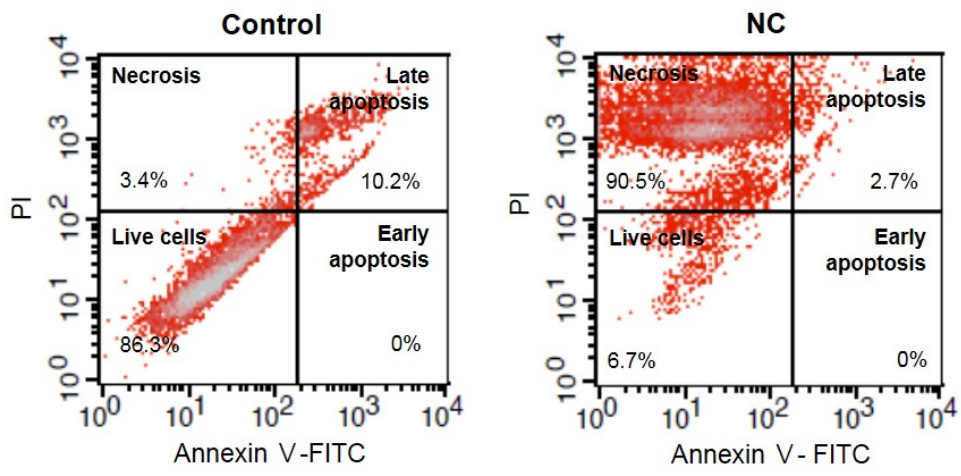
\* Correspondence to Youn-Hee Choi, M.D., Ph.D., Department of Physiology, School of Medicine, Ewha Womans University, 911-1 Mok-dong Yangcheon-gu, Seoul, 158-710, Korea. Phone: +82-2-2650-5838, Fax: +82-2-2650-5717, E-mail: [yc@ewha.ac.kr](mailto:yc@ewha.ac.kr)

**Supplementary Figure S1. Preparation of necrotic cells.** CRT-MG cells were frozen and thawed through five cycles of liquid nitrogen-water bath. Cells were stained using Annexin V-FITC and propidium iodide (PI), and then the quantitation of apoptosis/necrosis was determined by flow cytometry. The proportion of necrotic cells stained positive for PI was seen to consist of over 90% of prepared cells. NC, necrotic cells.

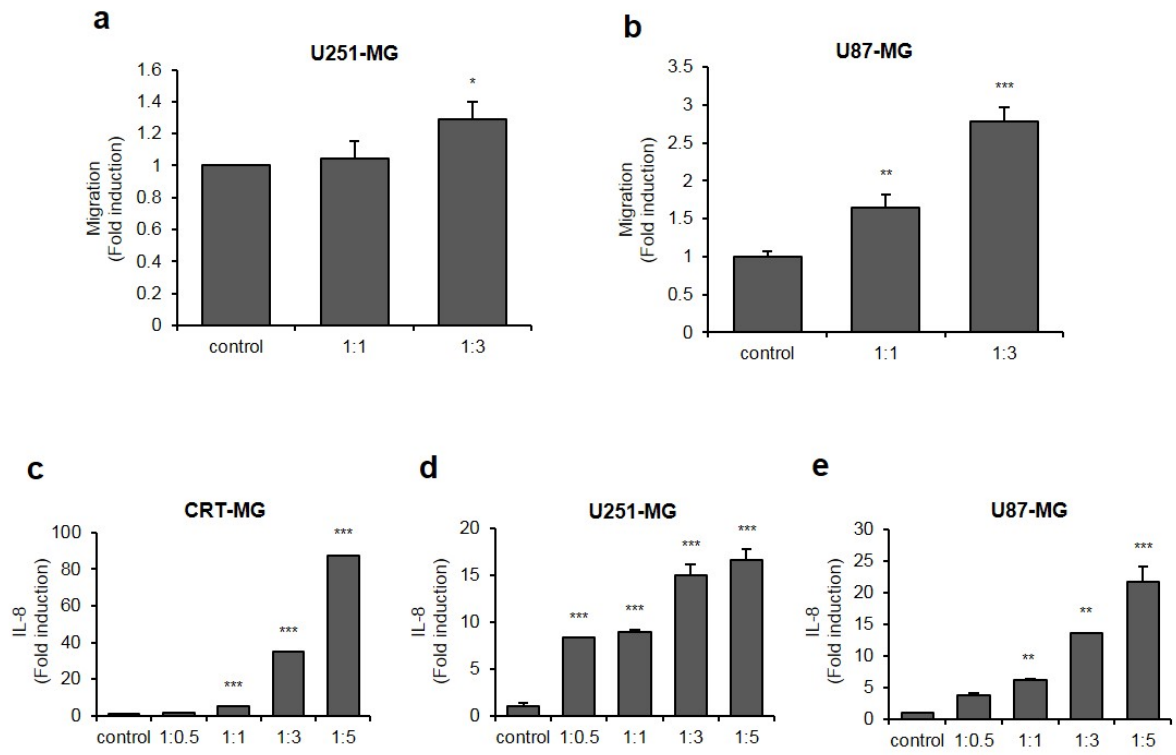
**Supplementary Figure S2. Necrotic cells increase migration and IL-8 expression in U251-MG and U87-MG cells.** (a,b) U251-MG and U87-MG cells were treated with necrotic cells for 0, 24 and 48 h. Migration activity was measured by calculating the area that advanced from boundary lines of scratch to cell-free space for 24 or 48 h. Data are presented as the fold induction compared with each untreated control cells.  $*P < 0.05$ ,  $**P < 0.01$ ,  $***P < 0.001$  vs. control. (c-e) CRT-MG, U251-MG and U87-MG cells were either untreated or treated with different ratios of necrotic cells (NC) for 24 h as indicated. After incubation, supernatants from each condition were collected and IL-8 protein levels were measured by ELISA. Data were presented as fold induction compared with control cells.  $*P < 0.05$ ,  $**P < 0.01$ ,  $***P < 0.001$  vs. control.

**Supplementary Figure S3. Necrotic cells affect proliferation of CRT-MG cells.** (a) CRT-MG cells ( $1 \times 10^4$ ) were seeded and treated with necrotic CRT-MG cells for 24 h. CCK-8 solution was further incubated for 4 h and absorbance was measured at 450 nm using a microplate reader to cell proliferation.  $***P < 0.001$  vs. control. (b) CRT-MG cells treated with necrotic cells in the presence or absence of either neutralizing IL-8 antibody (2.5  $\mu\text{g/ml}$ ) or control IgG (2.5  $\mu\text{g/ml}$ ) for 24h. Proliferation was measured by CCK-8.  $***P < 0.001$  vs. control. n.s., not significant. Data shown are representative of at least three experiments.

Supplementary Fig. S1

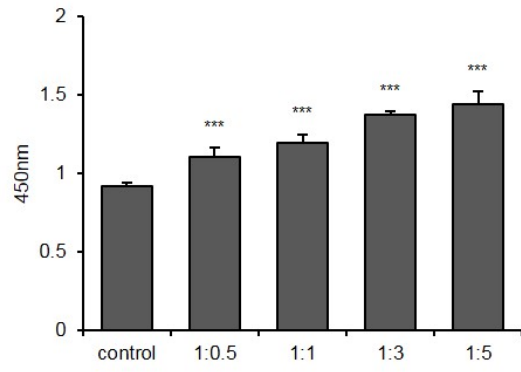


Supplementary Fig. S2



Supplementary Fig. S3

**a**



**b**

