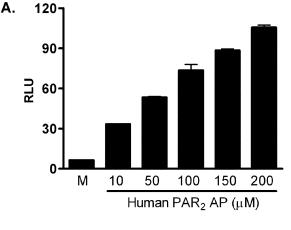
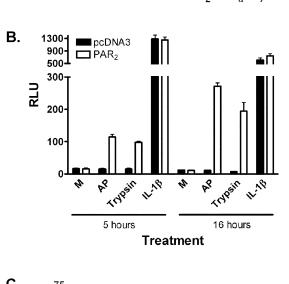
## Supplementary Figure Legends

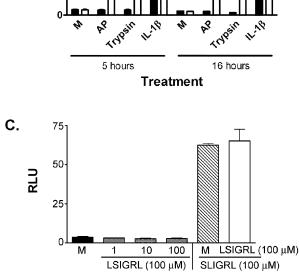
Supplemental Figure 1. HEK293T/huPAR2 transfectants show dose-dependent ELAM (NF-κB) reporter activation by PAR2 AP, respond to trypsin, and an inactive peptide does not antagonize AP activity. (A). HEK293T cells, co-transfected with huPAR2 construct together with the NF-κB luciferase (ELAM-luc) and pCMV1-β-galactosidase reporter constructs, were treated with huPAR2 AP at the indicated concentrations for 16 hr. Cell lysates were assayed for luciferase and β-galactosidase activities as described in the Experimental Procedures. A representative experiment is shown (n=6). (B) pcDNA3- or huPAR2-transfected HEK293T cells were treated with huPAR2 AP (100 μM), trypsin (10 nM), or rhIL-1β (30 ng/ml) in duplicate for 5 or 16 hr under serum-free conditions. RLU represents NF-κB-luciferase activity normalized to β-galactosidase activity in each sample. Data are representative of 2 separate experiments. (C). HEK293T cells co-transfected as described in (A) were treated with the indicated concentrations of scrambled peptide, LSIGRL-NH2 (left), or 100 μM of rodent PAR2 AP (SLIGRL-NH2) after a 1 hr pre-treatment of transfectants with medium (M) or LSIGRL-NH2 (100 μM) (and continuing its presence), for 16 hr. Reporter activities in cell lysates were analyzed. Results are representative of 2 individual experiments.

Supplemental Fig. 2. PAR<sub>2</sub> activation by AP does not require *de novo* protein synthesis. (A). HEK293T cells plated in 6-well plates (0.5 x  $10^6$  cells/dish) were transfected with the huPAR<sub>2</sub> (0.5 μg), ELAM-luc reporter (1.25 μg) and β-gal (0.25 μg) expression vectors, and 1 μg of blank pcDNA3 vector. Transfected cells were pre-treated with cycloheximide (+CHX, 5 μg/ml) or media (-CHX) for 1 hr. Cells were then stimulated for the indicated times with huPAR<sub>2</sub> AP (SLIGKV-NH<sub>2</sub>) (100 μM), without or with CHX. Cells were processed at the indicated time points and total RNA isolated. Relative quantities of steady-state luciferase and human GAPDH (internal control) mRNA were determined by semi-quantitative RT-PCR. A representative experiment is shown (n=3). (B). Two 12-well culture plates with 2 x  $10^5$  cells/well of HEK293T cells were co-transfected with untagged huPAR<sub>2</sub> construct together with the NF-κB luciferase and pCMV1-βgal reporter constructs. Transfectants were treated with either media (M) or  $100 \mu$ M of huPAR<sub>2</sub> AP (SLIGKV-NH<sub>2</sub>) for 11 hr (left side of graph). Supernatants from the first set of cells were transferred to the second set of PAR<sub>2</sub> transfectants and incubated for an additional 5 hr (right side of graph). Luciferase and β-galactosidase activities were measured in cell lysates. A representative experiment is shown (n=2).

## Supplementary Figure 1







## Supplementary Figure 2

