

SUPPLEMENTAL FIGURES:

Figure S1. Functional distribution of BAG3 interactome according to their (A) protein classes and (B) biological processes. Categorizations were based on information provided by the online resource PANTHER classification system.

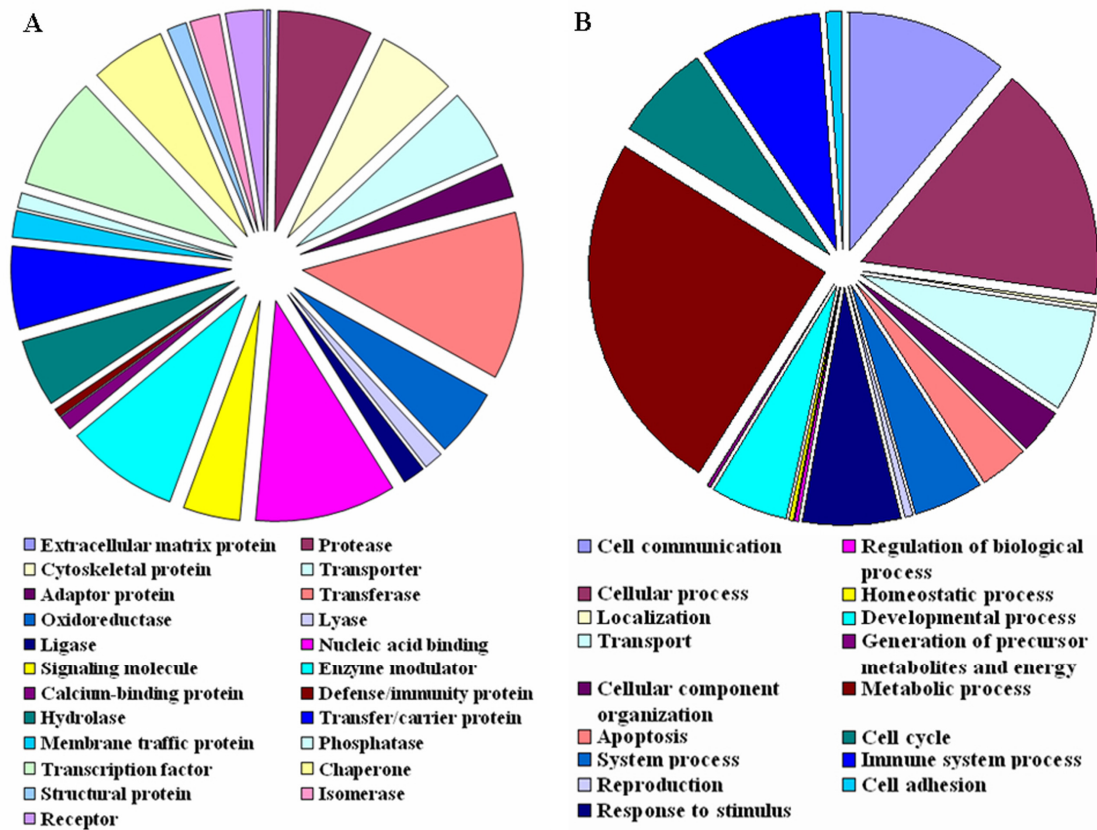


Figure S2. Overview of the GO SLim generic distribution of the identified BAG3 interacting proteins. The GO terms enriched in the set of BAG3 interacting proteins are shown as nodes connected by directed edges that indicate hierarchies and relationships between terms. Node size is proportional to the number of BAG3 interacting proteins belonging to the functional category. Node color indicates the corrected p -value for the enrichment of the term according to the legend. Information on all annotations is provided in Table S8-S10.

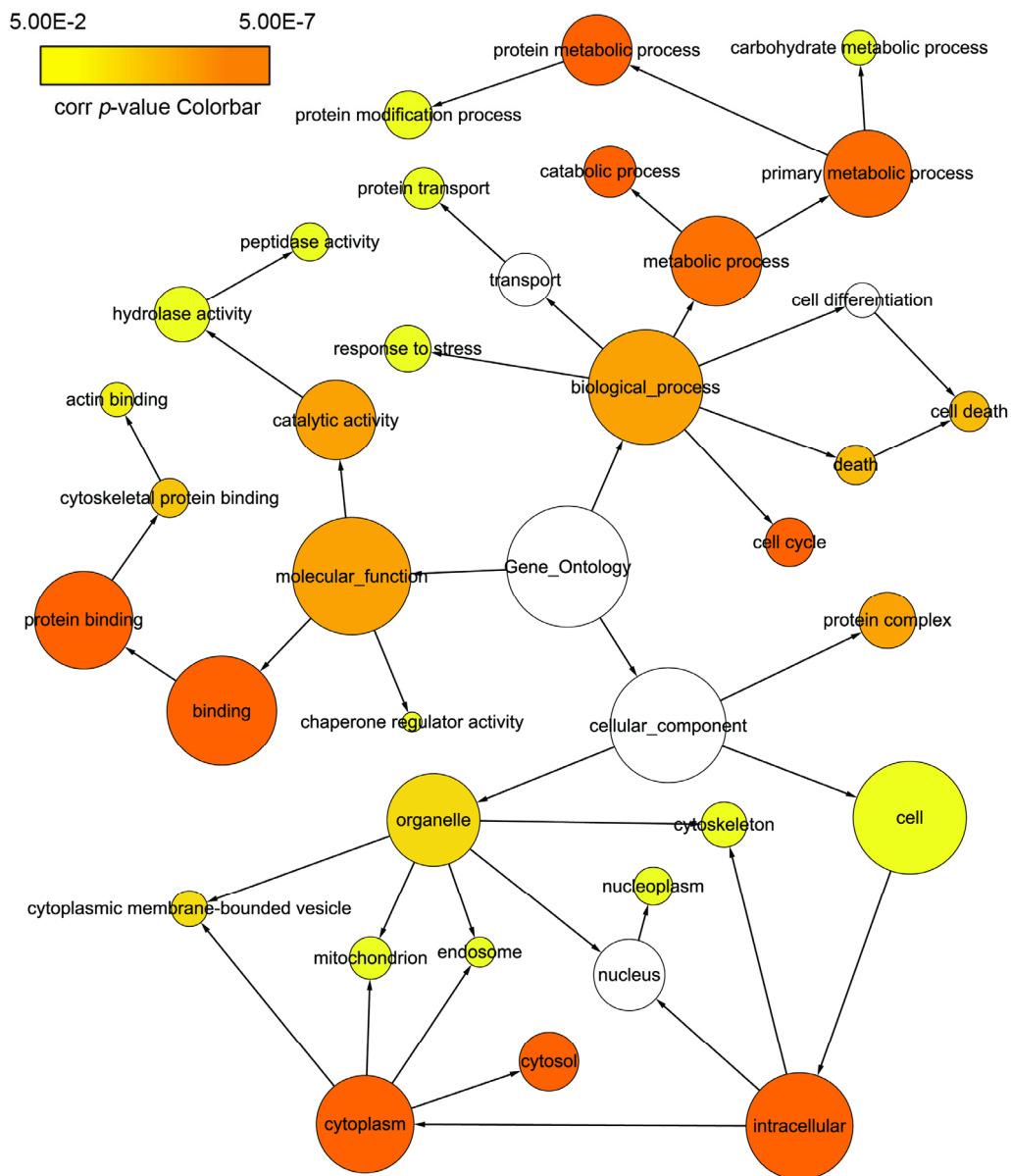
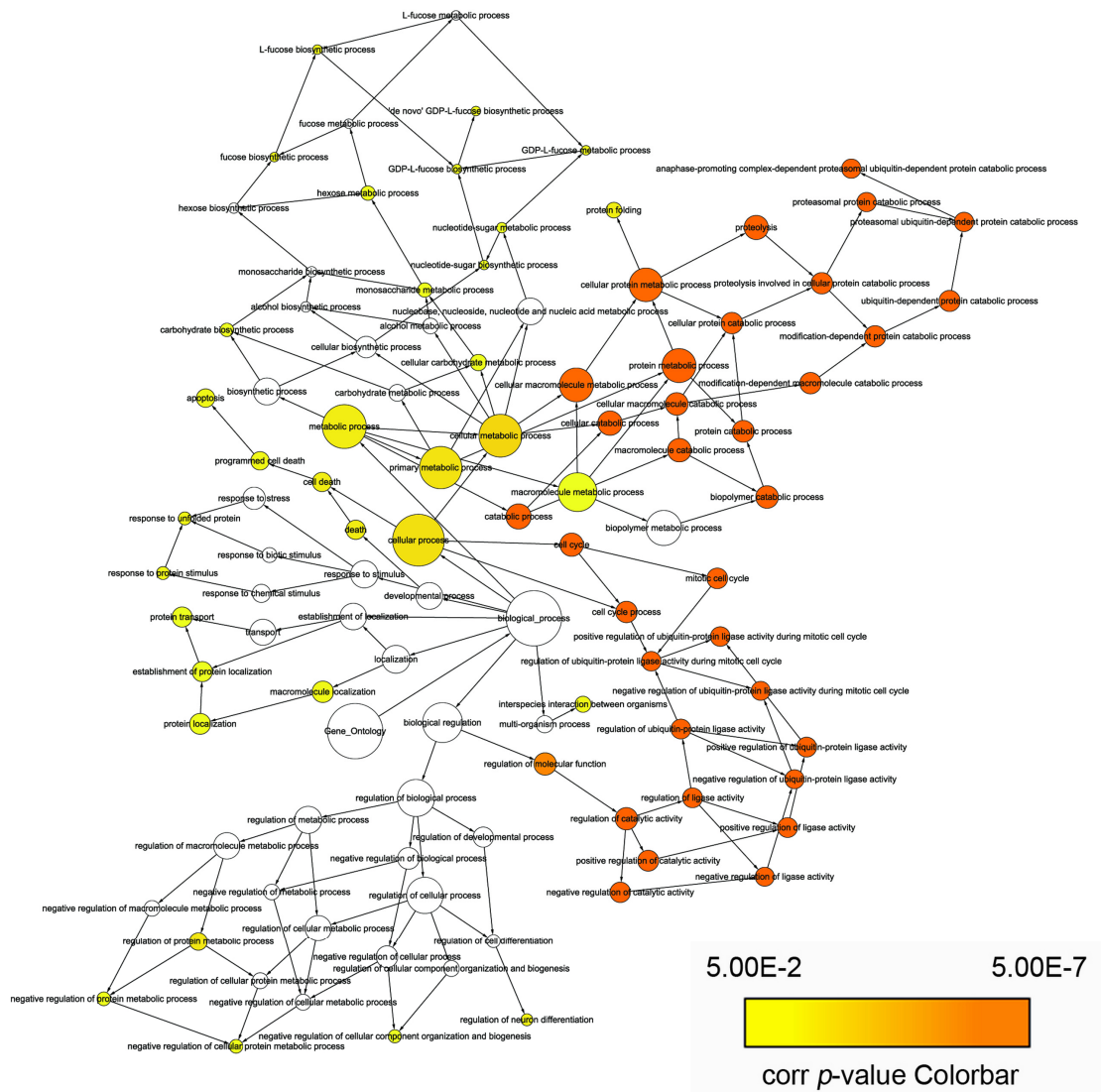
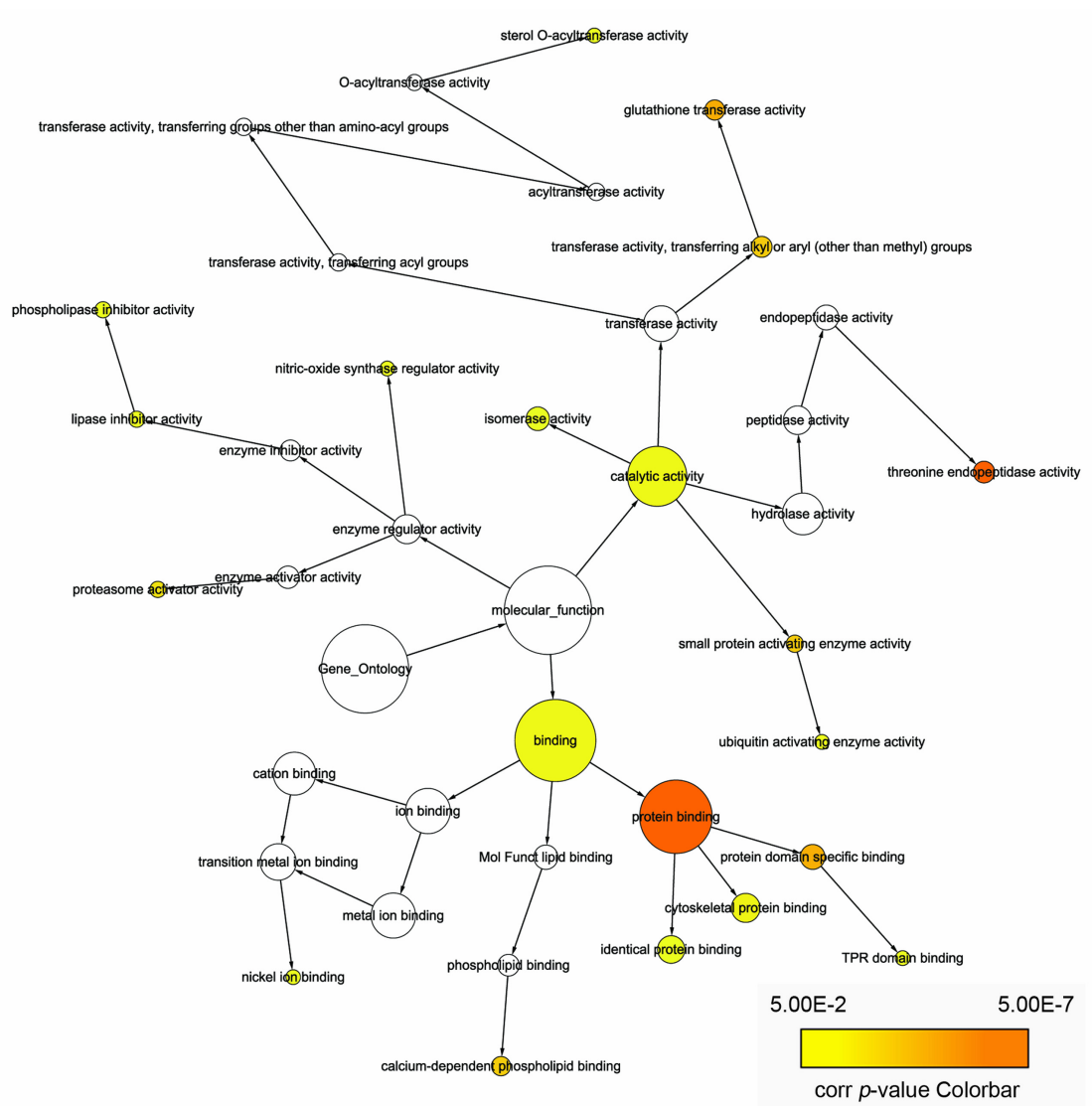


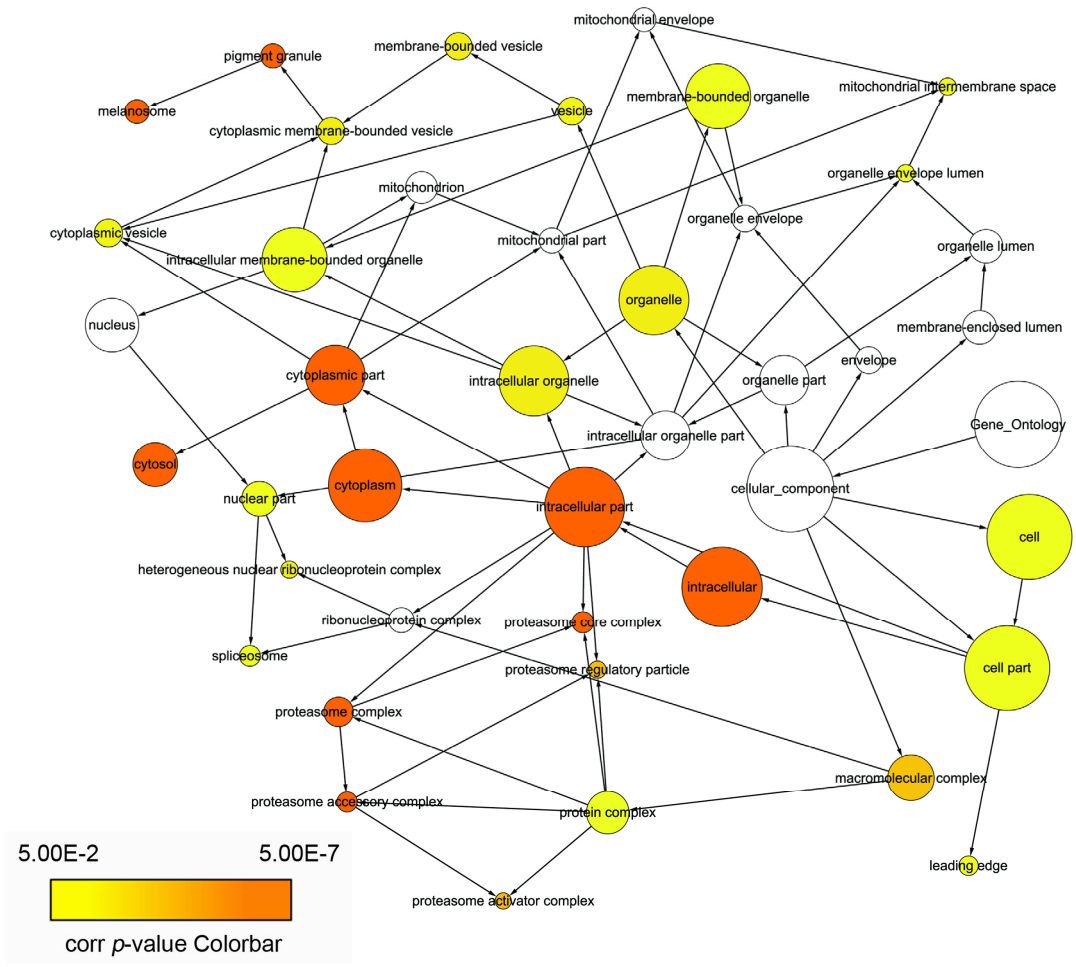
Figure S3. GO enrichment analysis of Bag3 interactome. The GO biological process (A), molecular function (B), and cellular component (C) terms enriched in the Bag3 interactome are shown as nodes connected by directed edges that indicate hierarchies and relationships between terms. Node size is proportional to the number of proteins belonging to the category. Node color indicates the corrected p -value (Benjamini-Hochberg false discovery rate correction) for the enrichment of the term according to the legend. The graphs were generated using Cytoscape v.2.6.3 and its plugin BiNGO v2.3.



A



B



C

Figure S4. The effect of knock-down of BAG3 on proteasome activity and MG-132-sensitivity in A549 cells. **(A)** Knock-down of BAG3 in A549 cells was confirmed by Western blotting. Actin served as a loading control. **(B)** Quantitative analysis of BAG3 knock-down on apoptosis in A549 cells. Data are expressed as the means \pm SD of the fractions of apoptotic cells from at least three experiments. **(C)** Effect of Knock-down of BAG3 on the chymotryptic, tryptic, and caspase-like activities of the 26S or **(D)** 20S proteasome in A549 cells, as measured using fluorogenic substrates. Experiments were repeated a minimum of three times. * $p < 0.05$ when compared with the control group. 1: Untreated A549 Cells; 2: A549 Cells treated with Control siRNA; 3: A549 Cells treated with BAG3 siRNA; 4: A549 Cells treated with MG-132; 5: A549 Cells treated with Control siRNA and MG-132; 6: A549 Cells treated with BAG3 siRNA and MG-132.

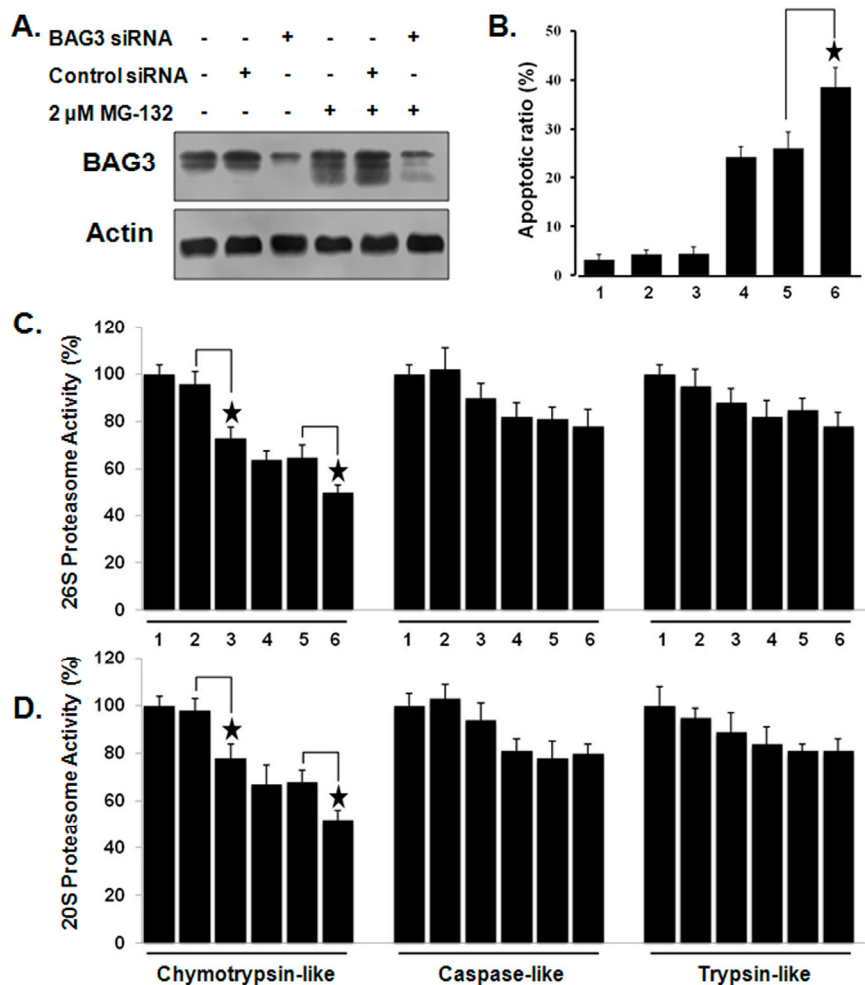


Figure S5. The effect of overexpression of BAG3 on proteasome activity and MG-132-sensitivity in A549 cells. **(A)** Overexpression of BAG3 in A549 cells was confirmed by Western blotting. **(B)** Overexpression of BAG3 reduces MG-132-sensitivity in A549 cells. **(C)** Effect of overexpression of BAG3 on the chymotryptic, tryptic, and caspase-like activities of the 26S or **(D)** 20S proteasome in A549 cells, as measured using fluorogenic substrates. Experiments were repeated a minimum of three times. * $p < 0.05$ when compared with the control group. 1: Untreated A549 Cells; 2: A549 Cells treated with blank vector; 3: A549 Cells treated with BAG3 plasmid; 4: A549 Cells treated with MG-132; 5: A549 Cells treated with blank vector and MG-132; 6: A549 Cells treated with BAG3 plasmid and MG-132.

