Autophagy is a degradation pathway, conserved from yeast to mammals. The uniqueness of this pathway lies in its function, it is applied in the cell especially under the adverse conditions. It helps the cell to deliver essential nutrients for life, it removes the damaged or superfluous organelles, protein aggregates and helps with recycling and maintains a constant inner environment. These functions can prolong cell life and the cells survive the adverse conditions. Autophagy may induce the programmed cell death type II. This paper describes the basic of autophagy machinery, regulation and influence of yeast autophagy to adapt to the stressful conditions. Understanding the mechanism and regulation of autophagy in yeast may help with the study of autophagy in mammals. In mammals, this degradation pathway disorders cause many diseases (especially neurodegenerative), autophagy also effects the formation of tumors.