ER Stress-induced Autophagy Antibody Sampler Kit

Cat# AK0156

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

PRODUCT DESCRIPTION

The endoplasmic reticulum (ER) is an organelle with essential biosynthetic and signaling functions in eukaryotic cells. Post synthesis of secretory and transmembrane proteins on polysomes, proteins are translocated into the ER where they are often modified by disulfide bond formation, amino-linked glycosylation, and folding. Different physiological and pathological conditions can disturb proper protein folding in the ER causing ER stress. ER stress activates an intracellular signaling transduction pathway called unfolded protein response (UPR) and autophagy to avoid cell death. The main role of UPR is to improve the protein load on the ER by shutting down protein translation and gene transcription to enhance ER's folding capacity. On the other hand, autophagy is a catabolic process for the autophagosomic-lysosomal degradation of bulk cytoplasmc contents. One of the chaperones aiding in proper protein folding is Binding immunoglobulin Protein (BiP). BiP works by binding to misfolded proteins to prevent them from forming aggregates and assists in proper refolding. The molecular machinery of autophagy was largely discovered in yeast and referred to as autophagy-related (Atg) genes. Formation of the autophagosome involves a ubiquitin-like conjugation system in which Atg12 is covalently bound to Atg5 and targeted to autophagosome vesicles. One of the proteins critical to autophagy process is Beclin-1, the mammalian orthologue of the yeast autophagy protein Apg6/Vps30. Beclin-1 can complement defects in yeast autophagy caused by loss of Apg6 and can also stimulate autophagy when overexpressed in mammalian cells. Mammalian Beclin-1 was originally isolated in a yeast two-hybrid screen for Bcl-2 interacting proteins and has been shown to interact with Bcl-2 and Bcl-xL, but not with Bax or Bak. Phosphorylation of the eukaryotic initiation factor 2 (eIF2) α subunit is a well-documented mechanism to downregulate protein synthesis under a variety of stress conditions. eIF2 binds GTP and Met-tRNAi and transfers Met-tRNA to the

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340552	HSPA5 Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse, Rat, Monkey	Rabbit
A340504	EIF2 alpha Polyclonal Antibody	20µ	WB, IHC, ELISA	Human, Mouse, Rat, Monkey	Rabbit

A340216	Phospho-EIF2 alpha (Ser51) Polyclonal Antibody	20µ	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340741	BECN1 Polyclonal Antibody	20µ	WB, ELISA	Human, Mouse	Rabbit
A340578	JNK1/2/3 Polyclonal Antibody	20µ	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
A340251	Phospho-JNK 1/2/3 (Thr183/Y185) Polyclonal Antibody	20µ	WB, ELISA	Human, Mouse, Rat	Rabbit
A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120µL	WB, ELISA	Rabbit	Goat

PRODUCT USE LIMITATION

These products are intended for research use only.