

HSP/Chaperone Antibody Sampler Kit

Cat# AK0170

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

PRODUCT DESCRIPTION

HSP70 and HSP90 are molecular chaperones expressed constitutively under normal conditions to maintain protein homeostasis and are induced upon environmental stress. HSP70 and HSP90 interact with unfolded proteins to prevent irreversible aggregation and catalyze the refolding of their substrates in an ATP-dependent manner. HSP40 family proteins bind unfolded proteins and prevent their aggregation, and deliver unfolded proteins to HSP70. HSP60 has primarily been known as a mitochondrial protein that is important for folding key proteins after import into the mitochondria. HSP60 is also present in the cytosol of many cells and is induced by stress, inflammatory and immune responses, autoantibodies correlated with Alzheimer's, coronary artery diseases, MS, and diabetes. Secretory and transmembrane proteins are synthesized on polysomes and translocate into the endoplasmic reticulum (ER) where they are often modified by the formation of disulfide bonds, amino-linked glycosylation and folding. The ER contains a pool of molecular chaperones including calnexin, BiP and protein disulfide isomerase (PDI). Calnexin is a calcium-binding protein embedded in the ER membrane that retains newly synthesized glycoproteins inside the ER to ensure proper folding and quality control. When protein folding is disturbed inside the ER, BiP synthesis is increased. Subsequently, BiP binds to misfolded proteins to prevent them from forming aggregates and assists them to refold properly. PDI catalyzes the formation and isomerization of disulfide bonds required to reach a protein's native state. Heat shock gene transcription is regulated by a family of heat shock factors (HSFs), transcriptional activators that bind to heat shock response elements (HSEs) located upstream of all heat shock genes. During attenuation from the heat shock response, HSF1 is repressed by direct binding of HSP70, HSP40/Hdj-1 and HSF binding protein 1 (HSBP1).

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340555	HSP60 Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
A340552	HSPA5 Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse, Rat, Monkey	Rabbit
A340554	HSP40 Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit

A340556	HSP90 alpha Polyclonal Antibody	20μL	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
A340454	CANX Polyclonal Antibody	20μL	WB, IHC, IF, 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.