

Inflammasome Antibody Sampler Kit

Cat# AK0175

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

PRODUCT DESCRIPTION

The innate immune system works as the first line of defense in protection from pathogenic microbes and host-derived signals of cellular distress. One way in which these “danger” signals trigger inflammation is through activation of inflammasomes, which are multiprotein complexes that assemble in the cytosol after exposure to pathogen-associated molecular patterns (PAMPs) or danger-associated molecular patterns (DAMPs) and result in the activation of caspase-1 and subsequent cleavage of proinflammatory cytokines IL-1 β and IL-18. Inflammasome complexes typically consist of a cytosolic pattern recognition receptor (PRR; a nucleotide-binding domain and leucine-rich-repeat [NLR] or AIM2-like receptor [ALR] family member), an adaptor protein (ASC/TMS1), and pro-caspase-1. A number of distinct inflammasome complexes have been identified, each with a unique PRR and activation triggers. The best characterized is the NLRP3 complex, which contains NLRP3, ASC, and pro-caspase-1. The NLRP3 inflammasome is activated in a two-step process. First, NF- κ B signaling is induced through PAMP- or DAMP-mediated activation of TLR4 or TNFR, resulting in increased expression of NLRP3, pro-IL-1 β , and pro-IL-18 (priming step, signal 1). Next, indirect activation of NLRP3 occurs by a multitude of signals (whole pathogens, PAMPs/DAMPs, potassium efflux, lysosomal-damaging environmental factors [uric acid, silica, alum] and endogenous factors [amyloid- β , cholesterol crystals], and mitochondrial damage), leading to complex assembly and activation of caspase-1 (signal 2). The complex inflammasome structure is built via domain interactions among the protein components. Other inflammasomes are activated by more direct means: double-stranded DNA activates the AIM2 complex, anthrax toxin activates NLRP1, and bacterial flagellin activates NLRC4. Activated caspase-1 induces secretion of proinflammatory cytokines IL-1 β and -18, but also regulates metabolic enzyme expression, phagosome maturation, vasodilation, and pyroptosis, an inflammatory programmed

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340131	NLRP3 Polyclonal Antibody	20 μ L	WB, ELISA	Human	Rabbit
A340419	AIM2 Polyclonal Antibody	20 μ L	WB, IHC, IF, ELISA	Human	Rabbit
A340386	Cleaved-CASP1 (D210) Polyclonal Antibody	20 μ L	WB, IHC, ELISA	Human	Rabbit

A340455	CASP1 Polyclonal Antibody	20μL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340437	PYCARD 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.