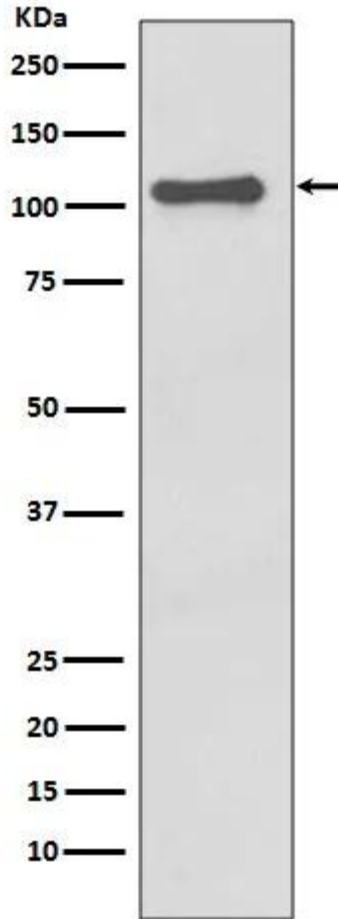


Product name:	NLRP3 Rabbit Monoclonal Antibody
Cat number:	MABN14399
Conjugate:	Unconjugated
Size:	100µL
Clone:	D4D8T
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Reactivity:	Human,Mouse,Rat
Applications:	Western Blot 1:500-1:2000 Flow Cytometry: 1:50-1:100 Immunoprecipitation: 1:20-1:50
Molecular Weight:	~115 kDa
Purification:	Affinity purification
Form:	liquid
Buffer:	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage:	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Background:

As the sensor component of the NLRP3 inflammasome, plays a crucial role in innate immunity and inflammation. As the sensor component of the NLRP3 inflammasome, plays a crucial role in innate immunity and inflammation. In response to pathogens and other damage-associated signals, initiates the formation of the inflammasome polymeric complex, made of NLRP3, PYCARD and CASP1 (and possibly CASP4 and CASP5). Recruitment of proCASP1 to the inflammasome promotes its activation and CASP1-catalyzed IL1 β and IL18 maturation and secretion in the extracellular milieu (PubMed:28847925, PubMed:33231615, PubMed:34133077). Activation of NLRP3 inflammasome is also required for HMGB1 secretion (PubMed:22801494). The active cytokines and HMGB1 stimulate inflammatory responses. Inflammasomes can also induce pyroptosis, an inflammatory form of programmed cell death (PubMed:34133077). Under resting conditions, NLRP3 is autoinhibited. NLRP3 activation stimuli include extracellular ATP, reactive oxygen species, K(+) efflux, crystals of monosodium urate or cholesterol, amyloid-beta fibers, environmental or industrial particles and nanoparticles, cytosolic dsRNA, etc. However, it is unclear what constitutes the direct NLRP3 activator. Activation in presence of cytosolic dsRNA is mediated by DHX33 (PubMed:23871209). Independently of inflammasome activation, regulates the differentiation of T helper 2 (Th2) cells and has a role in Th2 cell-dependent asthma and tumor growth (By similarity). During Th2 differentiation, required for optimal IRF4 binding to IL4 promoter and for IRF4-dependent IL4 transcription. Binds to the consensus DNA sequence 5'-GRRGGNRGAG-3'. May also participate in the transcription of IL5, IL13, GATA3, CCR3, CCR4 and MAF (By similarity).



Western blot analysis of NLRP3 expression in SH-SY5Y cell lysate.