

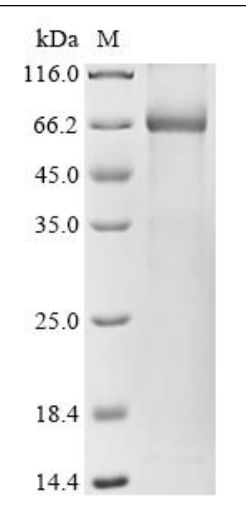
Recombinant Human NACHT, LRR and PYD domains-containing protein 3(NLRP3),partial

Catalog Number: RPC25978

Product Name	Recombinant Human NACHT, LRR and PYD domains-containing protein 3(NLRP3),partial
Catalog Number	RPC25978
Expression host	<i>E.coli</i>
Product Info	N-terminal 6xHis-tagged
Storage Buffer	20 mM HEPES,100 mM NaCl PH7.0, 50% glycerol
Storage	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Relevance	<p>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 IL1B and IL18 maturation and secretion in the extracellular milieu (PubMed:28847925). 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. 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).</p>

AA sequence	MKMASTRCKLARYLEDLEDVDLKKFKMHLEDYPPQKGCIPLRGQTE KADHVDLATLMIDFNAGEEKA WAMAVWIFAAINRRDLYEKAKRDEPK WGSDNARVSNPTVICQEDSIEEEWMGLLEYLSRISICKMKKDYRKKYR KYVRSRFQCIEDRNARLGESVSLNKRYTRLRLIKEHRSQQEREQELLAI GKTKTCESPVSPIKMELLFDPDDEHSEPVHTVVFQGAAGIGKILARK MMLDWASGTYQDRFDYLFYIHCREVSLVTQRSLGDLIMSCCPDPNPP IHKIVRKPSRILFLMDGFDELQGFDEHIGPLCTDWQKAERGDILLSSLI RKKLLPEASLLITRPVALEKLQHLLDHPRHVEILGFSEAKRKEYFFKY FSDEAQARAAFSLIQENEVLFTMCFIPLVCWIVCTGLKQQMESGKSLA QTSKTTTAVYVFFLSSLLQPRGGSQEHGLCAHLWGLCSLAADGIWNQ KILFEESDLRNHGLQKADVSAFLRMNLFQKEVDCEKFYSFIHMTFQEF FAAMYLL
References	"Mutation of a new gene encoding a putative pyrin-like protein causes familial cold autoinflammatory syndrome and Muckle-Wells syndrome." Hoffman H.M., Mueller J.L., Broide D.H., Wanderer A.A., Kolodner R.D. Nat. Genet. 29:301-305(2001)

Certificate of Analysis

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Storage Buffer	20 mM HEPES,100 mM NaCl PH7.0, 50% glycerol	
Batch Number	YA04824j7g5	
Nature	Human NLRP3-(AA 1-536)- Q96P20 -Partial Protein	
Purification	Affinity purified using IMAC	
Recommended Storage	Short term	2 to 8 °C, one week from the date of receipt
	Long term	-20 to -80 °C, six months from the date of receipt
Form	Liquid	
Date of detection	2021.08.05	
Test Items	Specifications	Results
Appearance	Clear Solution	pass
Concentration	0.1-5 mg/ml, by the Bradford Method.	0.5 mg/ml
Purity	≥90%, by SDS-PAGE quantitative densitometry by Coomassie Blue Staining.	
Molecular Weight	Predicted band size: 66.1 kDa	

Electrophoretic parameters	(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.		
Aseptic Processing	Not done		
Endotoxin Level	Untreated		
Activity	Not tested		
Conclusion	pass		
Analyst		Date	
Corrector		Date	