

Product datasheet for TP509270

Zc3h12a (NM_153159) Mouse Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse zinc finger CCCH type containing 12A (Zc3h12a), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>MR209270 protein sequence Red =Cloning site Green =Tags(s)

MSDPCGTKPVQESNPTMSLWSLEDHRSSQGRQPDPQDPVAKEAPTSELQMKVDFFRKLGYSSEIHSVLQ
KLGVQADTNTVLGELVKHGSATERECQALTAPSPQPPLVPRGGSTPKPSTLEPSLPEEDREGSDLRPVVI
DGSNVAMSHGNKEVFSCRGILLAVNWFLERGHDTITVFVPSWRKEQPRPDVPI TDQHILRELEKKILVF
TPSRRVGGKRVCYDDRFIVKLA FESDGVVSN DTYRDLQGERQEWKRFIEERLLMYSFVNDKFMPPDDP
LGRHGPSLDNFLRKKPLPSEHRKQPCPYGKKCTYGIKCRFFHPERPSRQRSVADEL RANALLSPRTPV
KDKSSQRSPASQSSSVSLEAEPGSLDGKKLGARSSPGPHREGSPQTCAPAGRSLPVSGGSFGPTEWLAH
TQDSLPTYSQECLDSGIGSLESQMSSELWGVRRGGSPGESGPTRGPYAGYHSYGSKVPAAPSFSPFRPAMGA
GHFSVPTDYVPPPPTYP SREYWSEPYPLPPPTV LQEPQRPSPGAGGGPWGRVGD LAKERAGVYTKLCGV
FPPHLVEAVMRRFPQLLDPQQLAAEILSYKSQHLSE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag:	C-MYC/DDK
Predicted MW:	65.6 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C after receiving vials.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.



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RefSeq: [NP_694799](#)

Locus ID: 230738

UniProt ID: [Q5D1E7](#)

RefSeq Size: 2805

Cytogenetics: 4 D2.2

RefSeq ORF: 1791

Synonyms: BC036563; MCPIP; MCPIP-1; Mccip1; Reg1

Summary: Endoribonuclease involved in various biological functions such as cellular inflammatory response and immune homeostasis, glial differentiation of neuroprogenitor cells, cell death of cardiomyocytes, adipogenesis and angiogenesis. Functions as an endoribonuclease involved in mRNA decay (PubMed:26000482). Modulates the inflammatory response by promoting the degradation of a set of translationally active cytokine-induced inflammation-related mRNAs, such as IL6 and IL12B, during the early phase of inflammation (PubMed:19322177, PubMed:21115689, PubMed:23185455, PubMed:26000482). Prevents aberrant T-cell-mediated immune reaction by degradation of multiple mRNAs controlling T-cell activation, such as those encoding cytokines (IL6 and IL2), cell surface receptors (ICOS, TNFRSF4 and TNFR2) and transcription factor (REL) (PubMed:23706741, PubMed:26000482, PubMed:19322177, PubMed:21115689, PubMed:23185455). Inhibits cooperatively with ZC3H12A the differentiation of helper T cells Th17 in lungs. They repress target mRNA encoding the Th17 cell-promoting factors IL6, ICOS, REL, IRF4, NFKBID and NFKBIZ. The cooperation requires RNA-binding by RC3H1 and the nuclease activity of ZC3H12A (PubMed:25282160). Self regulates by destabilizing its own mRNA (PubMed:22037600). Cleaves mRNA harboring a stem-loop (SL), often located in their 3' UTRs, during the early phase of inflammation in a helicase UPF1-dependent manner (PubMed:19322177, PubMed:23185455, PubMed:23706741, PubMed:26000482, PubMed:26134560). Plays a role in the inhibition of microRNAs (miRNAs) biogenesis (By similarity). Cleaves the terminal loop of a set of precursor miRNAs (pre-miRNAs) important for the regulation of the inflammatory response leading to their degradation, and thus preventing the biosynthesis of mature miRNAs (By similarity). Plays also a role in promoting angiogenesis in response to inflammatory cytokines by inhibiting the production of antiangiogenic microRNAs via its anti-dicer RNase activity (By similarity). Affects the overall ubiquitination of cellular proteins (PubMed:21115689). Positively regulates deubiquitinase activity promoting the cleavage at 'Lys-48'- and 'Lys-63'-linked polyubiquitin chains on TNF receptor-associated factors (TRAFs), preventing JNK and NF-kappa-B signaling pathway activation, and hence negatively regulating macrophage-mediated inflammatory response and immune homeostasis (PubMed:21115689). Induces also deubiquitination of the transcription factor HIF1A, probably leading to its stabilization and nuclear import, thereby positively regulating the expression of proangiogenic HIF1A-targeted genes. Involved in a TANK-dependent negative feedback response to attenuate NF-kappaB activation through the deubiquitination of IKBKG or TRAF6 in response to interleukin-1-beta (IL1B) stimulation or upon DNA damage (By similarity). Prevents stress granules (SGs) formation and promotes macrophage apoptosis under stress conditions, including arsenite-induced oxidative stress,

heat shock, and energy deprivation (PubMed:21971051). Plays a role in the regulation of macrophage polarization; promotes IL4-induced polarization of macrophages M1 into anti-inflammatory M2 state (PubMed:25934862). May also act as a transcription factor that regulates the expression of multiple genes involved in inflammatory response, angiogenesis, adipogenesis and apoptosis (PubMed:18178554, PubMed:19666473, PubMed:22739135). Functions as a positive regulator of glial differentiation of neuroprogenitor cells through an amyloid precursor protein (APP)-dependent signaling pathway (By similarity). Attenuates septic myocardial contractile dysfunction in response to lipopolysaccharide (LPS) by reducing I-kappa-B-kinase (IKK)-mediated NF-kappa-B activation, and hence myocardial proinflammatory cytokine production (PubMed:21616078).[UniProtKB/Swiss-Prot Function]