

**ZC12A Antibody (Center) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP10978c****Specification**

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**ZC12A Antibody (Center) Blocking peptide - Product Information**Primary Accession [Q5D1E8](#)**ZC12A Antibody (Center) Blocking peptide - Additional Information**

Gene ID 80149

**Other Names**

Ribonuclease ZC3H12A, 31--, MCP-induced protein 1, Zinc finger CCCH domain-containing protein 12A, ZC3H12A {ECO:0000312|EMBL:EAX073461}

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**ZC12A Antibody (Center) Blocking peptide - Protein Information**Name ZC3H12A ([HGNC:26259](#))**Function**

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:<a href="http://www.uniprot.org/citations/19909337" target="\_blank">19909337</a>). 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:<a href="http://www.uniprot.org/citations/26320658" target="\_blank">26320658</a>). 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) (By similarity). 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 (By similarity). Together with RC3H1, destabilizes TNFRSF4/OX40 mRNA by binding to the conserved stem loop structure in its 3'UTR (By similarity). Self regulates by destabilizing its own mRNA (By similarity). 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:<a href="http://www.uniprot.org/citations/19909337" target="\_blank">19909337</a>, PubMed:<a href="http://www.uniprot.org/citations/26320658" target="\_blank">26320658</a>, PubMed:<a href="http://www.uniprot.org/citations/26134560" target="\_blank">26134560</a>, PubMed:<a href="http://www.uniprot.org/citations/22561375" target="\_blank">22561375</a>). Plays a role in the inhibition of microRNAs (miRNAs) biogenesis (PubMed:<a href="http://www.uniprot.org/citations/22055188" target="\_blank">22055188</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/22055188" target="\_blank">22055188</a>). Also plays a role in promoting angiogenesis in response to inflammatory cytokines by inhibiting the production of antiangiogenic microRNAs via its anti-dicer RNase activity (PubMed:<a href="http://www.uniprot.org/citations/24048733" target="\_blank">24048733</a>). Affects the overall ubiquitination of cellular proteins (By similarity). 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 (By similarity). 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 (PubMed:<a href="http://www.uniprot.org/citations/24048733" target="\_blank">24048733</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/25861989" target="\_blank">25861989</a>). Prevents stress granule (SGs) formation and promotes macrophage apoptosis under stress conditions, including arsenite- induced oxidative stress, heat shock and energy deprivation (By similarity). Plays a role in the regulation of macrophage polarization; promotes IL4-induced polarization of macrophages M1 into anti- inflammatory M2 state (By similarity). May also act as a transcription factor that regulates the expression of multiple genes involved in inflammatory response, angiogenesis, adipogenesis and apoptosis (PubMed:<a href="http://www.uniprot.org/citations/16574901" target="\_blank">16574901</a>, PubMed:<a href="http://www.uniprot.org/citations/18364357" target="\_blank">18364357</a>). Functions as a positive regulator of glial differentiation of neuroprogenitor cells through an amyloid precursor protein (APP)-dependent signaling pathway (PubMed:<a href="http://www.uniprot.org/citations/19185603" target="\_blank">19185603</a>). 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 pro-inflammatory cytokine production (By similarity).

### Cellular Location

Nucleus. Cytoplasm. Cytoplasm, P-body. Rough endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q5D1E7}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q5D1E7}; Cytoplasmic side {ECO:0000250|UniProtKB:Q5D1E7}. Cytoplasmic granule {ECO:0000250|UniProtKB:Q5D1E7}. Note=Predominantly localized in the cytoplasm. Colocalizes with GW182 on many granule-like structures, probably corresponding to cytoplasmic GW bodies (GWBs), also called processing bodies (P bodies). Colocalizes with calnexin on the surface of the rough endoplasmic reticulum (RER) membrane and with translationally active polysomes (By similarity). Colocalizes with ZC3H12D in cytoplasmic mRNA processing P-body, also known as GW bodies (GWBs) (PubMed:22055188, PubMed:26134560)

### Tissue Location

Expressed in heart, placenta, spleen, kidney, liver and lung (PubMed:19909337). Expressed in leukocytes (PubMed:19909337) Expressed in monocyte (PubMed:16574901).

### ZC12A Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

#### **ZC12A Antibody (Center) Blocking peptide - Images**

#### **ZC12A Antibody (Center) Blocking peptide - Background**

ZC3H12A is an MCP1 (CCL2; MIM 158105)-induced protein that acts as a transcriptional activator and causes cell death of cardiomyocytes, possibly via induction of genes associated with apoptosis.

#### **ZC12A Antibody (Center) Blocking peptide - References**

Skalniak, L., et al. FEBS J. 276(20):5892-5905(2009) Vrotsos, E.G., et al. Brain Res. Bull. 79(2):97-103(2009) Niu, J., et al. J. Biol. Chem. 283(21):14542-14551(2008) Liang, J., et al. J. Biol. Chem. 283(10):6337-6346(2008) Zhou, L., et al. Circ. Res. 98(9):1177-1185(2006)