ARG43606
anti-ZBP1 / DAI antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes ZBP1 / DAI
Tested Reactivity	Hu
Tested Application	IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	ZBP1 / DAI
Species	Human
Immunogen	Synthetic peptide derived from human ZBP1 / DAI
Conjugation	Un-conjugated
Alternate Names	DAI; DLM1; DLM-1; C20orf183; DNA-dependent activator of IFN-regulatory factors1; Tumor stroma and activated macrophage protein DLM-1; DLM1

Application Instructions

Application table

Application	Dilution
IHC-P	1:25 - 1:200
WB	1:500 - 1:2000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	Human thyroid cancer tissue and Raji.
Observed Size	46 - 60 kDa

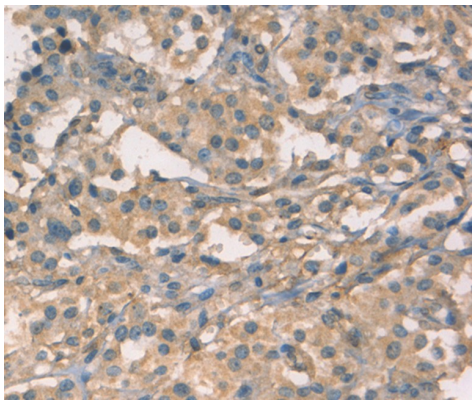
Properties

Form	Liquid
Purification	Purified by antigen-affinity chromatography.
Buffer	1XPBS (pH 7.4), 0.05% Sodium azide and 40% Glycerol
Preservative	0.05% Sodium azide
Stabilizer	40% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

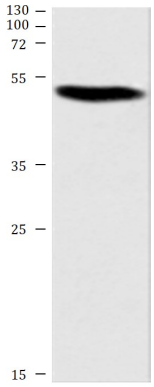
Gene Symbol	ZBP1
Gene Full Name	Z-DNA binding protein 1
Background	This gene encodes a Z-DNA binding protein. The encoded protein plays a role in the innate immune response by binding to foreign DNA and inducing type-I interferon production. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Dec 2011]
Function	Key innate sensor that recognizes and binds Z-RNA structures, which are produced by a number of viruses, such as herpesvirus, orthomyxovirus or flavivirus, and triggers different forms of cell death (PubMed:32200799). Once activated upon Z-RNA-binding, ZBP1 interacts with RIPK3, inducing the complementary pathways of apoptosis, necroptosis and pyroptosis (By similarity). Acts as a key activator of necroptosis, a programmed cell death process in response to death-inducing TNF-alpha family members: ZBP1-dependent necroptosis involves RIPK3 stimulation, which phosphorylates and activates MLKL, triggering execution of programmed necrosis (By similarity). In addition to TNF-induced necroptosis, necroptosis can also take place in the nucleus in response to orthomyxoviruses infection: ZBP1 recognizes and binds Z-RNA structures that are produced in infected nuclei by orthomyxoviruses, such as the influenza A virus (IAV), leading to ZBP1 activation, RIPK3 stimulation and subsequent MLKL phosphorylation, triggering disruption of the nuclear envelope and leakage of cellular DNA into the cytosol (PubMed:32200799). ZBP1-dependent cell death in response to IAV infection promotes interleukin-1 alpha (IL1A) induction in an NLRP3-inflammasome-independent manner: IL1A expression is required for the optimal interleukin-1 beta (IL1B) production, and together, these cytokines promote infiltration of inflammatory neutrophils to the lung, leading to the formation of neutrophil extracellular traps (By similarity). In some cell types, also able to restrict viral replication by promoting cell death-independent responses (By similarity). In response to Zika virus infection in neurons, promotes a cell death-independent pathway that restricts viral replication: together with RIPK3, promotes a death-independent transcriptional program that modifies the cellular metabolism via up-regulation expression of the enzyme ACOD1/IRG1 and production of the metabolite itaconate (By similarity). Itaconate inhibits the activity of succinate dehydrogenase, generating a metabolic state in neurons that suppresses replication of viral genomes (By similarity). By similarity1 Publication (Microbial infection) In case of herpes simplex virus 1/HHV-1 infection, forms hetero-amyloid structures with HHV-1 protein RIR1/ICP6 which may inhibit ZBP1-mediated necroptosis, thereby preventing host cell death pathway and allowing viral evasion. [UniProt]
Calculated Mw	46.3 kDa

Images



ARG43606 anti-ZBP1 / DAI antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human thyroid cancer tissue stained with ARG43606 anti-ZBP1 / DAI antibody at 1:50 dilution.



ARG43606 anti-ZBP1 / DAI antibody WB image

Western blot: Raji cell lysate stained with ARG43606 anti-ZBP1 / DAI antibody at 1:1000 dilution.