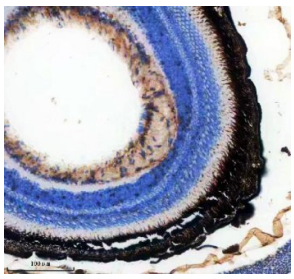
Zebrafish PYCARD Antibody / ASC Antibody (RZ1474)

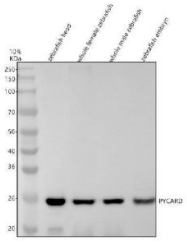
Catalog No.	Formulation	Size
RZ1474	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Lyophilized from a buffered saline solution containing 2% trehalose. Reconstitute with 0.2 mL distilled water to yield a final antibody concentration of 500 ug/mL.
UniProt	Q9I9N6
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish PYCARD Antibody / ASC Antibody is available for research use only.



Zebrafish PYCARD Antibody / ASC Antibody Zebrafish Eye IHC. Immunohistochemical staining of paraffin-embedded zebrafish eye tissue using Zebrafish PYCARD Antibody / ASC Antibody. PYCARD expression is detected within retinal cell layers, consistent with its role as an inflammasome adaptor protein that mediates innate immune signaling, inflammatory responses, and programmed cell death. Heat-induced epitope retrieval was performed using EDTA buffer prior to immunostaining with DAB chromogenic detection.



Zebrafish PYCARD Antibody / ASC Antibody Zebrafish Head, Female, Male and Embryo WB. Western blot analysis of zebrafish head, whole female, whole male, and embryo tissue lysates using Zebrafish PYCARD Antibody / ASC Antibody. A distinct immunoreactive band is detected at approximately 23 kDa in all four samples, consistent with expression of PYCARD (ASC). The observed molecular weight matches the predicted size of approximately 23 kDa, supporting specific detection of the target protein. Proteins were separated under reducing conditions, transferred to a nitrocellulose membrane, and detected following incubation with the primary antibody (0.5 ug/ml) and an HRP-conjugated goat anti-rabbit secondary antibody using ECL detection.

Description

Zebrafish PYCARD Antibody / ASC Antibody recognizes PYCARD, also known as apoptosis-associated speck-like protein containing a CARD (ASC), a key adaptor protein that links innate immune sensors to inflammatory caspase activation. PYCARD contains both a pyrin domain and a caspase recruitment domain, enabling assembly of multiprotein inflammasome complexes that activate caspase 1 and promote maturation of pro-inflammatory cytokines. Because inflammasome signaling is highly conserved among vertebrates, zebrafish provides an excellent model for investigating innate immunity, inflammation, host defense, and cell death. Zebrafish PYCARD Antibody / ASC Antibody is therefore well suited for studies of inflammasome biology and immune signaling.

PYCARD functions as a central scaffold for multiple inflammasome complexes, including those activated by nucleotide-binding leucine-rich repeat receptors and AIM2-like receptors. Following recognition of pathogens or cellular stress, PYCARD rapidly oligomerizes into characteristic ASC specks that recruit and activate inflammatory caspases. This signaling cascade promotes processing of interleukin 1 beta and interleukin 18 while initiating pyroptotic cell death, an important defense mechanism that eliminates infected or damaged cells. Zebrafish has emerged as a valuable vertebrate model for visualizing inflammasome assembly and studying innate immune responses in vivo because of its optical transparency and conserved immune pathways.

Beyond host defense, PYCARD participates in regulation of sterile inflammation, tissue repair, neuroinflammation, and responses to environmental injury. Dysregulated inflammasome activation has been associated with infectious disease, autoimmune disorders, metabolic disease, neurodegeneration, and cancer. Consequently, zebrafish is increasingly used to investigate how PYCARD-dependent signaling contributes to inflammatory pathology while providing a platform for evaluating therapeutic strategies targeting inflammasome activation. The conservation of PYCARD function between zebrafish and mammals makes experimental findings highly relevant to human inflammatory disease research.

Zebrafish PYCARD Antibody / ASC Antibody is a valuable research reagent for immunohistochemistry, immunofluorescence, western blotting, and other applications requiring reliable detection of PYCARD expression and localization. Investigators commonly use this antibody to examine inflammasome formation, characterize innate immune responses, monitor ASC speck formation, and investigate the molecular mechanisms underlying inflammation and pyroptosis. By supporting studies of one of the central adaptor proteins governing inflammasome signaling, Zebrafish PYCARD Antibody / ASC Antibody provides a dependable tool for immunology, developmental biology, and translational research.

Learn more about PYCARD biology, inflammasome signaling, and additional validated products on our PYCARD Antibody page.

This Zebrafish antibody is part of a broader Zebrafish / Danio rerio antibody panel offered by NSJ Bioreagents.

Application Notes

The optimal working dilution of the Zebrafish PYCARD Antibody / ASC Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish ASC/TMS1/PYCARD recombinant protein (amino acids N78-D203) was used as the immunogen for the Zebrafish ASC Antibody.

Storage

After reconstitution, the Zebrafish ASC Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Zebrafish PYCARD antibody, Zebrafish ASC antibody, Zebrafish Apoptosis-Associated Speck-Like Protein antibody, Zebrafish PYD and CARD Domain Containing Protein antibody, Zebrafish Inflammasome Adaptor Protein antibody, Zebrafish CARD5 antibody

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