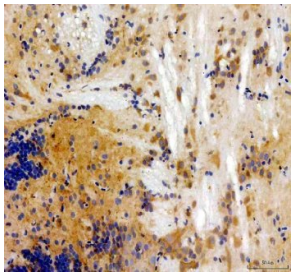
Zebrafish HSD17B1 Antibody / 17B-HSD1 Antibody (RZ1354)

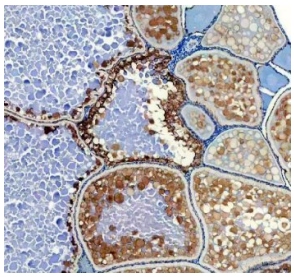
Catalog No.	Formulation	Size
RZ1354	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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	F1QUP2
Applications	Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish HSD17B1 Antibody / 17B-HSD1 Antibody is available for research use only.



Zebrafish HSD17B1 / 17B-HSD1 Antibody Brain IHC. Immunohistochemistry staining of FFPE zebrafish brain tissue using Zebrafish HSD17B1 Antibody demonstrates cytoplasmic HRP-DAB brown staining within scattered neural-associated cellular populations throughout brain tissue. The staining pattern is consistent with expression of Hydroxysteroid 17-Beta Dehydrogenase 1 (HSD17B1), also known as 17B-HSD1, an enzyme that catalyzes key reactions in estrogen biosynthesis and steroid hormone metabolism. Signal is observed within brain-associated tissue compartments, reflecting the established role of steroidogenic enzymes in neuroendocrine regulation, hormone-responsive signaling pathways, and maintenance of vertebrate nervous system function. Heat mediated antigen retrieval was performed in EDTA buffer. Primary antibody was incubated overnight at 4Â°C followed by detection using a peroxidase-conjugated goat anti-rabbit secondary antibody and DAB chromogen.



Zebrafish HSD17B1 / 17B-HSD1 Antibody Ovary IHC. Immunohistochemistry staining of FFPE zebrafish ovary tissue using Zebrafish HSD17B1 Antibody demonstrates strong cytoplasmic HRP-DAB brown staining within ovarian follicular and oocyte-associated cellular populations. The staining pattern is consistent with expression of Hydroxysteroid 17-Beta Dehydrogenase 1 (HSD17B1), also known as 17B-HSD1, a key steroidogenic enzyme that catalyzes the conversion of estrone to biologically active estradiol. Prominent staining within ovarian tissue is consistent with the established role of HSD17B1 in estrogen biosynthesis, reproductive physiology, gonadal development, and endocrine regulation. Heat mediated antigen retrieval was performed in EDTA buffer. Primary antibody was incubated overnight at 4Â°C followed by detection using a peroxidase-conjugated goat anti-rabbit secondary antibody and DAB chromogen.

Description

Zebrafish HSD17B1 Antibody / 17B-HSD1 Antibody recognizes Hydroxysteroid 17-Beta Dehydrogenase 1 (HSD17B1), an enzyme that plays a central role in steroid hormone metabolism and endocrine regulation. HSD17B1 is best known for catalyzing the conversion of estrone into the more biologically active estrogen estradiol, making it an important regulator of estrogen biosynthesis and reproductive physiology. Through its effects on steroid hormone availability, HSD17B1 influences developmental processes, gonadal function, tissue differentiation, and endocrine signaling pathways. The conserved nature of steroidogenic enzymes has established zebrafish as a valuable vertebrate model for investigating hormone metabolism and endocrine system regulation.

Estrogen signaling is essential for reproduction, growth, development, and maintenance of tissue homeostasis. In zebrafish, HSD17B1 contributes to regulation of sex steroid balance and helps control pathways involved in reproductive development and endocrine function. Expression of HSD17B1 is frequently examined in studies investigating gonadal differentiation, fertility, ovarian biology, and hormone-dependent developmental processes. Because steroid hormone concentrations must be tightly regulated throughout life, HSD17B1 serves as an important enzymatic control point within endocrine signaling networks.

Beyond reproductive biology, steroid hormones influence metabolism, growth regulation, immune responses, and cellular differentiation. Altered HSD17B1 activity can affect estrogen availability and downstream physiological pathways, resulting in significant effects on tissue development and endocrine homeostasis. Consequently, HSD17B1 remains an important target in studies focused on steroidogenesis, reproductive endocrinology, developmental biology, and hormone-responsive signaling mechanisms. Researchers frequently monitor HSD17B1 expression to better understand regulation of steroid hormone synthesis and metabolism.

Zebrafish provide unique advantages for studying endocrine function because developmental events can be observed directly in vivo and manipulated experimentally throughout embryogenesis and adulthood. Investigators commonly use zebrafish models to evaluate reproductive biology, steroidogenic pathways, endocrine-disrupting compounds, and hormonal regulation of development. Because many endocrine signaling mechanisms are highly conserved between zebrafish and mammals, findings generated in zebrafish frequently provide valuable insight into vertebrate hormone biology and disease-associated endocrine pathways.

At NSJ Bioreagents, we provide highly validated antibodies for endocrinology, reproductive biology, developmental biology, and zebrafish research. Zebrafish HSD17B1 Antibody / 17B-HSD1 Antibody targets a key enzyme involved in estrogen biosynthesis and steroid hormone metabolism. HSD17B1 expression is widely studied in the context of reproductive physiology, endocrine regulation, steroidogenesis, gonadal development, and hormone signaling. Continued investigation of this important enzyme is expanding our understanding of the molecular mechanisms that govern hormone production, reproductive function, and vertebrate endocrine biology.

Learn more about antibodies targeting this important estrogen biosynthesis enzyme on our HSD17B1 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 HSD17B1 Antibody / 17B-HSD1 Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish HSD17B1 recombinant protein (amino acids E99-K293) was used as the immunogen for the Zebrafish HSD17B1 / 17B-HSD1 Antibody.

Storage

After reconstitution, the Zebrafish HSD17B1 / 17B-HSD1 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 17B-HSD1 Antibody, Zebrafish Hydroxysteroid 17-Beta Dehydrogenase 1 Antibody, Zebrafish Estrogen Biosynthesis Enzyme Antibody, Zebrafish Steroid Hormone Metabolism Antibody, Zebrafish Estradiol Synthesis Enzyme Antibody, Zebrafish Endocrine Regulation Marker Antibody

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