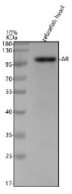
Zebrafish Androgen receptor Antibody / AR (RZ1202)

Catalog No.	Formulation	Size
RZ1202	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	A4GT83
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Androgen receptor antibody is available for research use only.



Western blot analysis of zebrafish Androgen receptor protein using Zebrafish Androgen receptor antibody and 1) zebrafish head tissue lysates. Predicted molecular weight ~96 kDa.

Description

Zebrafish Androgen receptor antibody targets the Androgen receptor, a nuclear hormone receptor that regulates androgen-dependent gene expression and plays essential roles in reproductive system development, muscle physiology, metabolism, and sex differentiation in Danio rerio. Zebrafish, also known as Danio rerio, express a single androgen receptor gene, ar, which encodes a ligand-activated transcription factor composed of an N-terminal activation domain, a central DNA binding domain, and a C-terminal ligand-binding domain. The protein resides primarily in the cytoplasm in its unliganded form and translocates to the nucleus following androgen binding, where it regulates transcription of hormone-responsive genes.

The Androgen receptor belongs to the nuclear receptor superfamily, a group of ligand-regulated transcription factors involved in diverse physiological processes. In zebrafish embryos and larvae, ar expression appears in developing gonads, skeletal muscle, brain regions associated with neuroendocrine signaling, and tissues undergoing sex-specific differentiation. A Zebrafish Androgen receptor antibody is suitable for research applications examining nuclear translocation, hormonal regulation of gene expression, and receptor distribution across reproductive and metabolic tissues.

AR-mediated signaling contributes to pathways controlling muscle growth, steroid hormone responsiveness, germ cell development, and behavioral differentiation. In zebrafish, androgen exposure influences sex ratios, secondary sex characteristics, and gonadal maturation, with AR acting as the central transcription factor linking endocrine signals to target gene regulation. The receptor interacts with co-activators and co-repressors, including nuclear receptor co-regulators that modulate chromatin structure and transcriptional output. These interactions help integrate endocrine inputs with developmental and metabolic states.

Structurally, the zebrafish Androgen receptor shares the canonical features of nuclear receptors: a zinc-finger DNA binding domain that recognizes androgen response elements, a ligand-binding domain responsible for steroid recognition, and regulatory regions enabling co-factor recruitment. The zebrafish ar gene maps to chromosome 3, where regulatory elements control tissue-specific and developmental stage-specific expression. Co-localization studies often identify AR alongside markers of steroidogenic tissues such as Leydig cells, Sertoli cells, and ovarian follicular cells, as well as neural populations responsive to hormonal signaling.

A Zebrafish Androgen receptor antibody is suitable for detecting AR in research exploring androgen-regulated processes in Danio rerio, including gonadal differentiation, muscle growth, neuroendocrine signaling, and metabolic regulation. Nuclear accumulation following androgen treatment provides a distinct readout of hormone pathway activation and receptor engagement with chromatin. These features make the antibody valuable for developmental biology studies, endocrine research, and investigations into transcriptional responses to steroid hormones, and this reagent is provided for research use by NSJ Bioreagents.

Application Notes

Optimal dilution of the Zebrafish Androgen receptor antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Androgen receptor recombinant protein (amino acids E12-Q852) was used as the immunogen for the Zebrafish Androgen receptor antibody.

Storage

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