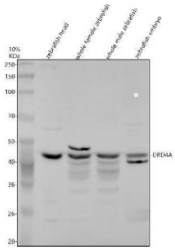
# Zebrafish DRD4 Antibody / Dopamine Receptor D4 Antibody (RZ1414)

| Catalog No. | Formulation | Size |
|---|---|---|
| RZ1414 | 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** | A0A0R4IR92 |
| **Applications** | Western blot: 0.5-1ug/ml |
| **Limitations** | This Zebrafish DRD4 Antibody / Dopamine Receptor D4 Antibody is available for research use only. |



Zebrafish DRD4 Antibody Multi-Tissue WB. Western blot analysis of 1) zebrafish head tissue lysate, 2) whole female zebrafish lysate, 3) whole male zebrafish lysate, and 4) zebrafish embryo lysate using Zebrafish DRD4 Antibody / Dopamine Receptor D4 Antibody. A prominent immunoreactive band is detected at approximately 43 kDa in all samples, consistent with the expected molecular weight of DRD4A. DRD4A is a dopamine-responsive G protein-coupled receptor that mediates dopaminergic signaling involved in nervous system development, neurotransmission, behavior, and neuromodulatory regulation. The observed expression across adult and embryonic zebrafish tissues supports the widespread role of DRD4A in vertebrate neural signaling pathways. Minor additional bands observed in some samples may represent receptor isoforms, post-translationally modified forms, or background reactivity commonly encountered with membrane-associated GPCR proteins. Electrophoresis was performed on a 10% SDS-PAGE gel under reducing conditions. Predicted molecular weight: ~43 kDa. Observed molecular weight: ~43 kDa.

## Description

Zebrafish DRD4 Antibody / Dopamine Receptor D4 Antibody recognizes DRD4A, a member of the dopamine receptor family and the class A rhodopsin-like G protein-coupled receptor (GPCR) superfamily. Dopamine receptors mediate the

actions of dopamine, an essential neurotransmitter that regulates behavior, cognition, movement, motivation, learning, and neuroendocrine signaling. Upon activation by dopamine, DRD4 receptors primarily couple to inhibitory G proteins that modulate intracellular signaling pathways and influence neuronal excitability and synaptic communication.

Zebrafish DRD4 Antibody is valuable for studying dopaminergic signaling pathways during vertebrate development. Dopamine plays critical roles in nervous system formation, neuronal differentiation, and establishment of neural circuits. Expression of DRD4 receptors contributes to the regulation of neurotransmission and cellular responses that influence behavioral and physiological processes. Because zebrafish provide a powerful model for in vivo neurodevelopmental studies, analysis of DRD4 expression can help elucidate mechanisms that govern nervous system organization and function.

Zebrafish DRD4 Antibody is also useful for investigations of brain function, behavior, and neuromodulatory signaling. Dopamine receptors participate in pathways that regulate locomotion, sensory processing, reward-associated behaviors, and cognitive activity. Alterations in dopaminergic signaling can significantly impact neuronal communication and behavioral outcomes. Consequently, DRD4 has become an important target for studies examining neurotransmitter regulation and neural network activity in vertebrate systems.

Zebrafish DRD4 Antibody supports research involving GPCR biology, neurotransmitter signaling, neurodevelopment, and behavioral neuroscience. The evolutionary conservation of dopaminergic pathways between zebrafish and mammals makes zebrafish an attractive model for studying the molecular mechanisms that control dopamine-dependent cellular responses. Expression analysis of DRD4 can provide insights into receptor localization, neuronal function, and the regulation of signaling pathways involved in brain development and physiology.

Zebrafish DRD4 Antibody is additionally relevant for studies examining neurological disorders and neuropharmacology. Dopamine receptors represent important therapeutic targets and are widely investigated in relation to cognition, attention, motivation, and neuropsychiatric disease mechanisms. As a result, DRD4 remains an important biomarker for investigations of dopaminergic signaling, receptor regulation, and vertebrate nervous system biology.

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 DRD4 Antibody / Dopamine Receptor D4 Antibody should be determined empirically by the investigator.

## Immunogen

An E.coli-derived Zebrafish DRD4A recombinant protein (amino acids M1-R300) was used as the immunogen for the Zebrafish DRD4A Antibody.

## Storage

After reconstitution, the Zebrafish DRD4A 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 DRD4 Antibody, Zebrafish Dopamine Receptor D4 Antibody, Zebrafish DRD4A Antibody, Zebrafish D4 Dopamine Receptor Antibody, Zebrafish Dopaminergic Receptor Antibody, Zebrafish GPCR Antibody

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