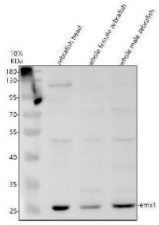
Zebrafish EMX1 Antibody / Empty Spiracles Homeobox 1 Antibody (RZ1391)

Catalog No.	Formulation	Size
RZ1391	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	Q804S6
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish EMX1 Antibody / Empty Spiracles Homeobox 1 Antibody is available for research use only.



Zebrafish EMX1 Antibody Brain WB. Western blot analysis of EMX1 using anti-EMX1 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: zebrafish head tissue lysates, Lane 2: whole female zebrafish tissue lysates, Lane 3: whole male zebrafish tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-EMX1 antigen antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus WB. Western blotting Substrate with Tanon 5200 system. A specific band was detected for EMX1 at approximately 26 kDa. The expected band size for EMX1 is at 26 kDa.

Description

Zebrafish EMX1 Antibody / Empty Spiracles Homeobox 1 Antibody is useful for studying Empty Spiracles Homeobox 1 (EMX1), a homeobox-containing transcription factor involved in neural development and regional patterning of the

vertebrate brain. EMX1 belongs to the EMX family of developmental regulators and functions as a DNA-binding protein that controls gene expression programs governing neurogenesis, neuronal differentiation, and tissue specification during embryonic development. Through these activities, EMX1 contributes to formation and organization of the developing central nervous system.

EMX1 is a member of the highly conserved homeobox gene family, a group of transcription factors that regulate developmental patterning and cell fate determination. Homeobox proteins play critical roles in establishing positional identity within developing tissues and directing cellular differentiation programs. As a transcriptional regulator, EMX1 participates in genetic networks that influence neural progenitor cell behavior, regional brain specification, and maturation of neuronal populations.

In zebrafish, EMX1 expression is associated with developing neural tissues and regions of the embryonic forebrain. Proper regulation of developmental transcription factors is essential for normal formation of the nervous system, coordination of neuronal differentiation, and establishment of functional neural circuitry. Analysis of EMX1 expression can therefore provide insight into mechanisms governing brain development, neural patterning, and vertebrate embryogenesis.

Zebrafish has become a valuable model for studying developmental neurobiology because many molecular pathways controlling nervous system formation are highly conserved among vertebrates. The transparency of developing embryos allows direct observation of neural development, while genetic accessibility enables detailed investigation of transcription factors involved in brain patterning and neuronal specification. Developmental regulators such as EMX1 are therefore widely utilized in studies of neural development and embryonic tissue organization.

Beyond its role in early development, EMX1 serves as a useful marker for investigations of neural lineage specification and developmental gene regulation. Because homeobox transcription factors occupy central positions within developmental signaling networks, they remain important subjects of research in neurobiology, developmental biology, stem cell biology, and vertebrate embryogenesis.

Zebrafish EMX1 antibodies are commonly used in immunohistochemistry, immunofluorescence, western blotting, and related protein detection applications to evaluate EMX1 expression and localization. These reagents support investigations of forebrain development, neural patterning, neuronal differentiation, developmental transcription factor biology, neurogenesis, and vertebrate embryonic development.

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 EMX1 Antibody / Empty Spiracles Homeobox 1 Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish EMX1 recombinant protein (amino acids K18-A231) was used as the immunogen for the Zebrafish EMX1 Antibody.

Storage

After reconstitution, the Zebrafish EMX1 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 Empty Spiracles Homeobox 1 Antibody, Zebrafish EMX-1 Antibody, Zebrafish Homeobox Protein EMX1 Antibody, Zebrafish Forebrain Development Marker Antibody, Zebrafish Cortical Development Factor Antibody, Zebrafish Transcription Factor EMX1 Antibody