APE112Fi01 100μg
Active Ephrin B2 (EFNB2)
Organism Species: ***Danio rerio (Zebrafish)***
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Leu25~Asn193
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 5.9
Predicted Molecular Mass: 22.7kDa
Accurate Molecular Mass: 23kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8ºC for one month.
Aliquot and store at -80ºC for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

LILDSIYWNTTNTKFVPGQGLVLYPQIGDKMDIVCPRVEGGSMEGVEYYKLYMVPLEQLKSCQV
TKADTPLLNCVKPDQDVKFTLKFQEFSPNLWGLEFFRGKDYYIISTSNGTMEGLDNQEGGVCKT
KSMKIIMKVGQNPSDPISPKDYPTSYPPKHPDLGGKDSKSN

[ACTIVITY]

Ephrin B2 (EFNB2) is a transmembrane member of the ephrin-B family and a key ligand for Eph receptor tyrosine kinases. It mediates contact-dependent bidirectional signaling—forward via Eph receptors and reverse through its own cytoplasmic domain—governing cell adhesion, migration and repulsion critical for neuronal, vascular and epithelial development. EFNB2 binds preferentially to EPHB4 and EPHA3, driving angiogenesis by regulating endothelial cell sprouting and proliferation, and is also vital for heart morphogenesis and skeletal development. Dysregulated EFNB2 expression is linked to tumor progression, intervertebral disc degeneration and vascular malformations, with its signaling pathways emerging as potential therapeutic targets for cancers and cardiovascular diseases. DLL4-Notch signaling directly upregulates EFNB2 expression to modulate trophoblast migration and invasion.To detect the activity of recombinant zebrafish EFNB2 , a functional ELISA assay was performed to evaluate the interaction between recombinant zebrafish EFNB2 and recombinant rat dLL4. Briefly, dLL4 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μL were then transferred to EFNB2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-dLL4 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5

times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. Measured by its binding ability in a functional ELISA. When Recombinant zebrafish EFNB2 is Immobilized at 2 μg/mL(100 μLwell), the concentration of dLL4 that produces 50% optimal bindingresponse is found to be approximately 0.146 μg/mL.

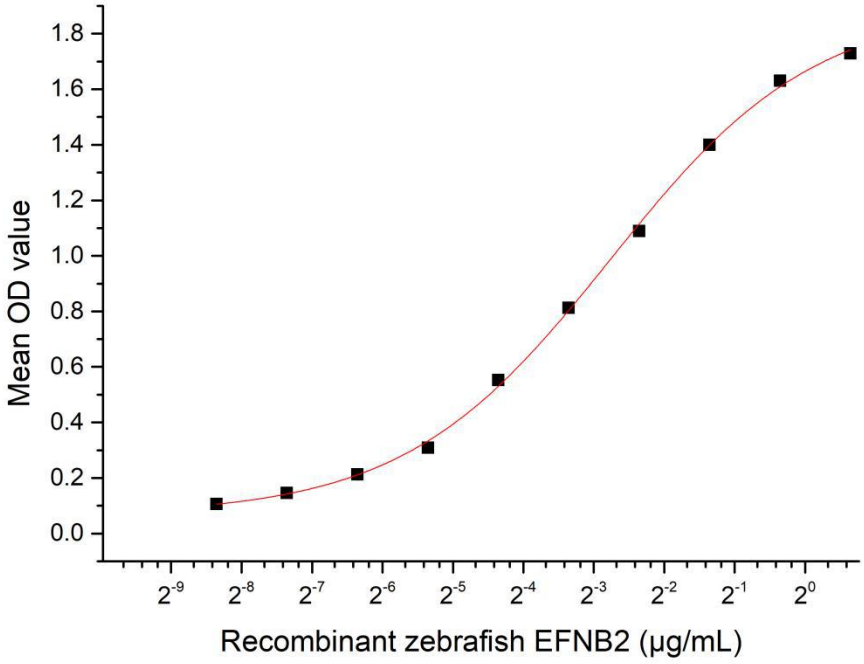


Figure 1. The binding activity of recombinant zebrafish EFNB2 and recombinant rat dLL4

[IDENTIFICATION]

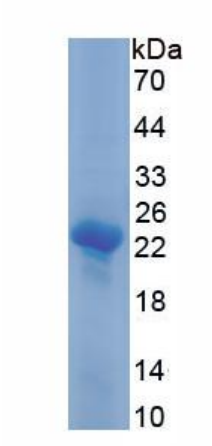


Figure 2. SDS-PAGE

Sample: Active recombinant EFNB2, Zebrafish

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.