

## Anti-NFIB/NF1B2 Antibody Picoband® (monoclonal, 4D6E4) PE Conjugated

Catalog Number: M01537-1-PE

### About NFIB

Nuclear factor 1 B-type is a protein that in humans is encoded by the NFIB gene. The NFIB gene is a part of the NFI gene complex that includes three other genes (NFIA, NFIC and NFIX). The NFIB gene is a protein coding gene that also serves as a transcription factor. This gene is essential in embryonic development and it works together with its gene complex to initiate tissue differentiation in the fetus. Through knockout experiments, researchers found that mice without the NFIB gene have severely underdeveloped lungs. This mutation does not seem to cause spontaneous abortions because in utero the fetus does not use its lungs for respiration. However, this becomes lethal once the fetus is born and has to take its first breath. It is thought that NFIB plays a role in down regulating the transcription factors TGF-beta1 and Shh in normal gestation because they remained high in knockout experiments. The absence of NFIB also leads to insufficient amounts of surfactant being produced which is one reason why the mice cannot breathe once it is born. The knockout experiments demonstrated that NFIB has a significant role in fore-brain development. NFIB is typically found in pontine nuclei of the CNS, the cerebral cortex and the white matter of the brain and without NFIB these areas are dramatically affected.

### Overview

Product Name	Anti-NFIB/NF1B2 Antibody Picoband® (monoclonal, 4D6E4) PE Conjugated
Reactive Species	Human, Mouse, Rat
Application	Recommended applications are based on the parent unconjugated antibody (Flow Cytometry, IF, ICC, WB). Customers may select suitable applications according to their experimental needs.
Clonality	Monoclonal 4D6E4
Formulation	Each vial contains 50% glycerol, 0.9% NaCl, 0.2% Na <sub>2</sub> HPO <sub>4</sub> , 0.02% NaN <sub>3</sub> .
Storage Instructions	At -20°C for one year from date of receipt. Avoid repeated freezing and thawing. Protect from light.
Host	Mouse
Uniprot ID	O00712

### Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human NFIB/NF1B2, identical to the related mouse and rat sequences.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
Form	Liquid

Concentration	0.5 mg/mL
Purification	Immunogen affinity purified.
Conjugate	PE Excitation Wavelength: 566 nm Emission Wavelength: 574 nm
Suggested Dilutions	Optimal dilutions should be determined by end users.

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