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antibody and ELISA experts

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Anti-Oct4/POU5F1 Antibody Picoband®

Catalog Number: A00174-3

About POU5F1

Oct-4 (octamer-binding transcription factor 4), also known as POU5F1 (POU domain, class 5, transcription factor 1), is a protein that in humans is encoded by the POU5F1 gene. It is mapped to 6p21.33. This gene encodes a transcription factor containing a POU homeodomain that plays a key role in embryonic development and stem cell pluripotency. Aberrant expression of this gene in adult tissues is associated with tumorigenesis. This gene can participate in a translocation with the Ewing's sarcoma gene on chromosome 21, which also leads to tumor formation. Alternative splicing, as well as usage of alternative AUG and non-AUG translation initiation codons, results in multiple isoforms. One of the AUG start codons is polymorphic in human populations. Related pseudogenes have been identified on chromosomes 1, 3, 8, 10, and 12.

Overview

Product Name	Anti-Oct4/POU5F1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Oct4/POU5F1 Antibody Picoband® catalog # A00174-3. Tested in WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	Q01860

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human Oct4/POU5F1, which shares 94.1% amino acid (aa) sequence identity with mouse POU5F1.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG

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Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human, Mouse, Rat

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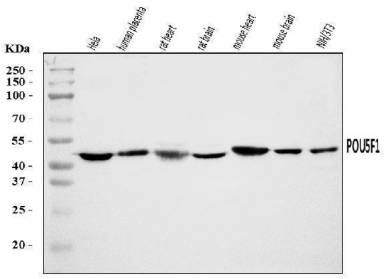
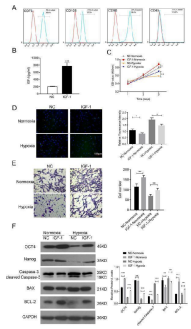
Anti-Oct4/POU5F1 Antibody Picoband® (A00174-3) Images



Western blot analysis of Oct4/POU5F1 using anti-Oct4/POU5F1 antibody (A00174-3). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human placenta tissue lysates, Lane 3: rat heart tissue lysates, Lane 4: rat brain tissue lysates, Lane 5: mouse heart tissue lysates, Lane 6: mouse brain tissue lysates, Lane 7: mouse NIH/3T3 whole cell 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-Oct4/POU5F1 antigen affinity purified polyclonal antibody (Catalog # A00174-3) at 0.5 ug/mL overnight at 4°C, 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 Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Oct4/POU5F1 at approximately 39-45 kDa. The expected band size for Oct4/POU5F1 is at 39 kDa.



Effect of IGF-1 overexpression on BMSCs. a Identification of BMSCs by flow cytometry analysis. b Supernatants from cultured BMSCs-NC and BMSCs-IGF-1 were collected and subjected to ELISA to determine IGF-1 levels. c Cells were exposed to hypoxia for 48 h, and cell proliferation was determined by MTS assay. d Apoptosis was determined by TUNEL assay. e Cell migration was determined by Transwell assay. f Expression of OCT4, NANOG, cleaved caspase-3, BAX, and BCL-2 was determined by Western blotting. All assays were performed in triplicate (* P

1 Publications Citing This Product

1. PubMed ID: 10.1186/s13287-019-1544-y, IGF-1 enhances BMSC viability, migration, and anti-apoptosis in myocardial infarction via secreted frizzled-related protein 2 pathway

Visit bosterbio.com/anti-oct4-pou5f1-picoband-trade-antibody-a00174-3-boster.html to see all 1 publications.

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