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Anti-PCBP2/hnRNP E2 Antibody Picoband™ (monoclonal, 4B9C7)

Catalog # ABO16244

Specification

Anti-PCBP2/hnRNP E2 Antibody Picoband™ (monoclonal, 4B9C7) - Product Information

Application	**WB, IF, ICC, FC**
Primary Accession	Q15366
Host	**Mouse**
Isotype	**Mouse IgG2a**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-PCBP2/hnRNP E2 Antibody Picoband™ (monoclonal, 4B9C7) . Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.

Reconstitution
Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Anti-PCBP2/hnRNP E2 Antibody Picoband™ (monoclonal, 4B9C7) - Additional Information

Gene ID 5094

Other Names
Poly(rC)-binding protein 2, Alpha-CP2, Heterogeneous nuclear ribonucleoprotein E2, hnRNP E2, PCBP2 {ECO:0000303|PubMed:7607214, ECO:0000312|HGNC:HGNC:8648}

Calculated MW
39 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat
Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human

Contents
Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.

Immunogen
E.coli-derived human PCBP2/hnRNP E2 recombinant protein (Position: Q197-K276).

Purification
Immunogen affinity purified.

Storage	**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.**

Anti-PCBP2/hnRNP E2 Antibody Picoband™ (monoclonal, 4B9C7) - Protein Information

Name PCBP2 {ECO:0000303|PubMed:7607214, ECO:0000312|HGNC:HGNC:8648}

Function
Single-stranded nucleic acid binding protein that binds preferentially to oligo dC (PubMed:12414943, PubMed:7607214). Major cellular poly(rC)-binding protein (PubMed:12414943). Also binds poly(rU) (PubMed:12414943). Acts as a negative regulator of antiviral signaling (PubMed:19881509, PubMed:35322803). Negatively regulates cellular antiviral responses mediated by MAVS signaling (PubMed:19881509). It acts as an adapter between MAVS and the E3 ubiquitin ligase ITCH, therefore triggering MAVS ubiquitination and degradation (PubMed:19881509). Negativeley regulates the cGAS-STING pathway via interaction with CGAS, preventing the formation of liquid- like droplets in which CGAS is activated (PubMed:35322803). Together with PCBP1, required for erythropoiesis, possibly by regulating mRNA splicing (By similarity).

Cellular Location
Nucleus. Cytoplasm. Note=Loosely bound in the nucleus (PubMed:7607214). May shuttle between the nucleus and the cytoplasm (PubMed:7607214).

Tissue Location
Detected in all tissues examined.

Anti-PCBP2/hnRNP E2 Antibody Picoband™ (monoclonal, 4B9C7) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-PCBP2/hnRNP E2 Antibody Picoband™ (monoclonal, 4B9C7) - Images

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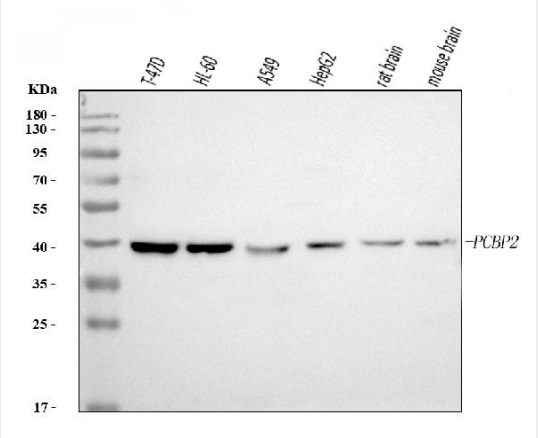

Figure 1. Western blot analysis of PCBP2/hnRNP E2 using anti-PCBP2/hnRNP E2 antibody (M02425).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human T-47D whole cell lysates,
Lane 2: human HL-60 whole cell lysates,
Lane 3: human A549 whole cell lysates,
Lane 4: human HepG2 whole cell lysates,
Lane 5: rat brain tissue lysates,
Lane 6: mouse brain 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 mouse anti-PCBP2/hnRNP E2 antigen affinity purified monoclonal antibody (Catalog # M02425) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for PCBP2/hnRNP E2 at approximately 39 kDa. The expected band size for PCBP2/hnRNP E2 is at 39 kDa.

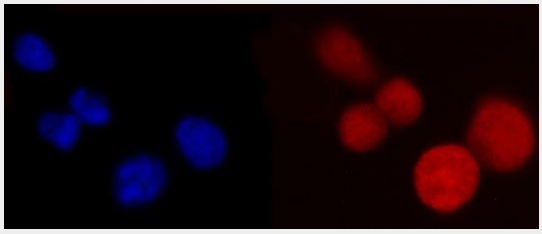

Figure 2. IF analysis of PCBP2/hnRNP E2 using anti-PCBP2/hnRNP E2 antibody (M02425).
PCBP2/hnRNP E2 was detected in an immunocytochemical section of Caco-2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-PCBP2/hnRNP E2 Antibody (M02425) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Mouse IgG (BA1141) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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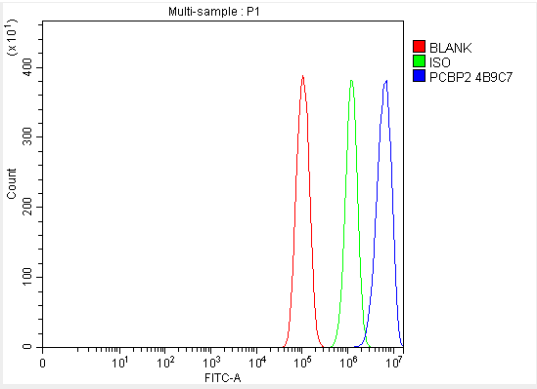

Figure 3. Flow Cytometry analysis of PC-3 cells using anti-PCBP2/hnRNP E2 antibody (M02425). Overlay histogram showing PC-3 cells stained with M02425 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-PCBP2/hnRNP E2 Antibody (M02425, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-PCBP2/hnRNP E2 Antibody Picoband™ (monoclonal, 4B9C7) - Background

Poly(rC)-binding protein 2 is a protein that in humans is encoded by the PCBP2 gene. The protein encoded by this gene appears to be multifunctional. Along with PCBP-1 and hnRNPK, it is one of the major cellular poly(rC)-binding proteins. The encoded protein contains three K-homologous (KH) domains which may be involved in RNA binding. Together with PCBP-1, this protein also functions as a translational coactivator of poliovirus RNA via a sequence-specific interaction with stem-loop IV of the IRES, promoting poliovirus RNA replication by binding to its 5'-terminal cloverleaf structure. It has also been implicated in translational control of the 15-lipoxygenase mRNA, human papillomavirus type 16 L2 mRNA, and hepatitis A virus RNA. The encoded protein is also suggested to play a part in formation of a sequence-specific alpha-globin mRNP complex which is associated with alpha-globin mRNA stability. This multiexon structural mRNA is thought to be retrotransposed to generate PCBP-1, an intronless gene with functions similar to that of PCBP2. This gene and PCBP-1 have paralogous genes (PCBP3 and PCBP4) which are thought to have arisen as a result of duplication events of entire genes. This gene also has two processed pseudogenes (PCBP2P1 and PCBP2P2). Multiple transcript variants encoding different isoforms have been found for this gene.