

## Anti-RPS14 Antibody Picoband®

Catalog Number: A03696-2

### About RPS14

40S ribosomal protein S14 is a protein that in humans is encoded by the RPS14 gene. Ribosomes, the organelles that catalyze protein synthesis, consist of a small 40S subunit and a large 60S subunit. Together these subunits are composed of 4 RNA species and approximately 80 structurally distinct proteins. This gene encodes a ribosomal protein that is a component of the 40S subunit. The protein belongs to the S11P family of ribosomal proteins. It is located in the cytoplasm. Transcript variants utilizing alternative transcription initiation sites have been described in the literature. As is typical for genes encoding ribosomal proteins, there are multiple processed pseudogenes of this gene dispersed through the genome. In Chinese hamster ovary cells, mutations in this gene can lead to resistance to emetine, a protein synthesis inhibitor. Multiple alternatively spliced transcript variants encoding the same protein have been found for this gene.

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## Overview

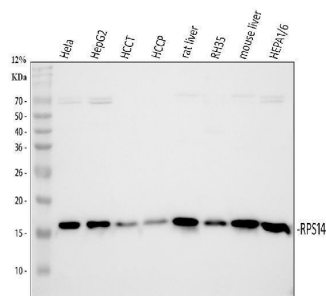
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name         | Anti-RPS14 Antibody Picoband®                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Reactive Species     | Human, Mouse, Rat                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Description          | Boster Bio Anti-RPS14 Antibody Picoband® catalog # A03696-2. Tested in ELISA, Flow Cytometry, IP, IF, IHC, ICC, 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          | ELISA, Flow Cytometry, IP, IF, IHC, ICC, WB                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Clonality            | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Formulation          | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .                                                                                                                                                                                                                                                                                                                                                                       |
| 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           | P62263                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Technical Details

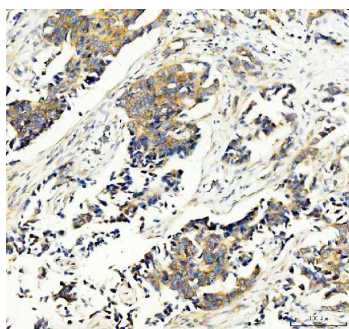
|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| Immunogen | E.coli-derived human RPS14 recombinant protein (Position: E11-K143). |
|-----------|----------------------------------------------------------------------|

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti- Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.                                                                                                                                                                                                                                                                                                                                                     |
| Cross Reactivity              | No cross-reactivity with other proteins.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Isotype                       | Rabbit IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Form                          | Lyophilized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Concentration                 | Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Purification                  | Immunogen affinity purified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Suggested Dilutions           | <p>Western blot, 0.1-0.25 ug/ml, Human, Mouse, Rat<br/>           Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human, Mouse, Rat<br/>           Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human<br/>           Immunoprecipitation, 0.5-2 ug/ml, Human<br/>           Flow Cytometry (Fixed), 1-3 ug/1x10<sup>6</sup> cells, Human<br/>           ELISA, 0.1-0.5 ug/ml, -</p> <p>Note: For flow cytometry (FCM), validated for fixed cells only. Not validated for FACS or surface flow cytometry using live cells.</p> |

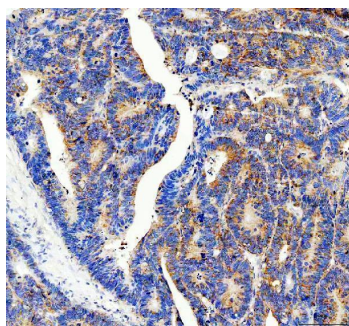
## Anti-RPS14 Antibody Picoband® (A03696-2) Images



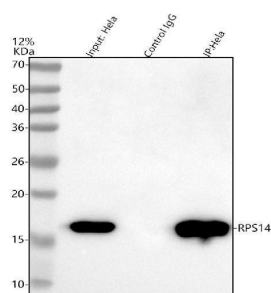
Western blot analysis of RPS14 using anti-RPS14 antibody (A03696-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human hepatocellular carcinoma tumor tissue (HCCT) lysates, Lane 4: human hepatocellular carcinoma paracancerous tissue (HCCP) lysates, Lane 5: rat liver tissue lysates, Lane 6: rat RH35 whole cell lysates, Lane 7: mouse liver tissue lysates, Lane 8: mouse HEPA1-6 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-RPS14 antigen affinity purified polyclonal antibody (Catalog # A03696-2) at 0.25 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 RPS14 at approximately 16 kDa. The expected band size for RPS14 is at 16 kDa.



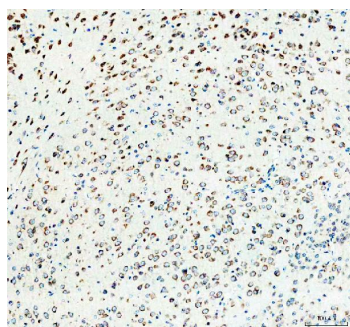
IHC analysis of RPS14 using anti-RPS14 antibody (A03696-2). RPS14 was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-RPS14 Antibody (A03696-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



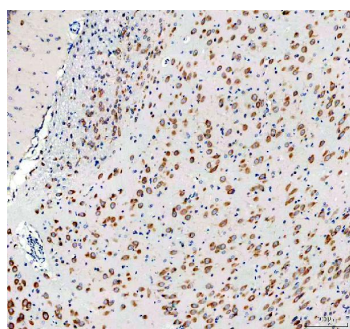
IHC analysis of RPS14 using anti-RPS14 antibody (A03696-2). RPS14 was detected in a paraffin-embedded section of human colon cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-RPS14 Antibody (A03696-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



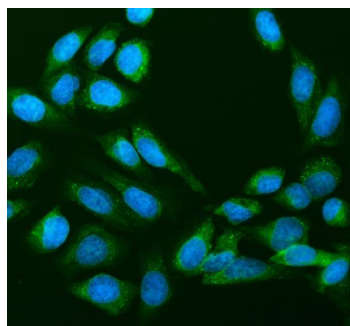
Immunoprecipitating RPS14 in HeLa whole cell lysate. Western blot analysis of RPS14 using anti-RPS14 antibody (A03696-2). Lane 1: HeLa whole cell lysates (30ug) Lane 2: Rabbit control IgG instead of anti-RPS14 antibody in HeLa whole cell lysate. Lane 3: anti-RPS14 antibody (2ug) + HeLa whole cell lysate (500ug) After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-RPS14 antigen affinity purified polyclonal antibody (A03696-2) at a dilution of 0.5 ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1196-200). A specific band was detected for RPS14 at approximately 16 kDa. The expected band size for RPS14 is at 16 kDa.



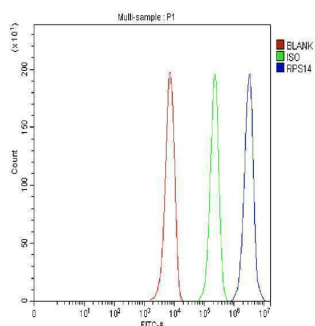
IHC analysis of RPS14 using anti-RPS14 antibody (A03696-2). RPS14 was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-RPS14 Antibody (A03696-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of RPS14 using anti-RPS14 antibody (A03696-2). RPS14 was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-RPS14 Antibody (A03696-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IF analysis of RPS14 using anti-RPS14 antibody (A03696-2). RPS14 was detected in an immunocytochemical section of U2OS 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 ug/mL rabbit anti-RPS14 Antibody (A03696-2) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:500 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.



Flow Cytometry analysis of HepG2 cells using anti-RPS14 antibody (A03696-2). Overlay histogram showing HepG2 cells stained with A03696-2 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-RPS14 Antibody (A03696-2, 1 ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

### Anti-RPS14 Antibody

For Research Use Only. Not for use in diagnostic procedures.