10320 Camino Santa Fe, Suite G
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# Anti-Beta 2 Microglobulin Picoband Antibody

**Catalog # ABO10078**

## Specification

### Anti-Beta 2 Microglobulin Picoband Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC** |
| Primary Accession | P61769 |
| Host | **Rabbit** |
| Reactivity | **Human** |
| Clonality | **Polyclonal** |
| Format | **Lyophilized** |

**Description**
Rabbit IgG polyclonal antibody for Beta-2-microglobulin(B2M) detection. Tested with WB, IHC-P in Human.

**Reconstitution**
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

### Anti-Beta 2 Microglobulin Picoband Antibody - Additional Information

**Gene ID** 567

**Other Names**
Beta-2-microglobulin, Beta-2-microglobulin form pI 5.3, B2M

**Calculated MW**
13715 MW KDa

**Application Details**
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat<br>
<br>Western blot, 0.1-0.5 µg/ml, Human<br>

**Subcellular Localization**
Secreted . Detected in serum and urine.

**Protein Name**
Beta-2-microglobulin

**Contents**
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

**Immunogen**
E.coli-derived human Beta 2 Microglobulin recombinant protein (Position: Q22-M119). Human Beta 2 Microglobulin shares 69.4% and 74.5% amino acid (aa) sequence identity with mouse and rat Beta 2 Microglobulin, respectively.

**Purification**
Immunogen affinity purified.

**Cross Reactivity**
No cross reactivity with other proteins

| | |
|---|---|
| Storage | **At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.** |

## Anti-Beta 2 Microglobulin Picoband Antibody - Protein Information

**Name** B2M (HGNC:914)

**Function**
Component of the class I major histocompatibility complex (MHC). Involved in the presentation of peptide antigens to the immune system. Exogenously applied M.tuberculosis EsxA or EsxA-EsxB (or EsxA expressed in host) binds B2M and decreases its export to the cell surface (total protein levels do not change), probably leading to defects in class I antigen presentation (PubMed:<a href="http://www.uniprot.org/citations/25356553" target="_blank">25356553</a>).

**Cellular Location**
Secreted. Cell surface. Note=Detected in serum and urine (PubMed:1336137, PubMed:7554280). {ECO:0000269|PubMed:7554280, ECO:0000269|Ref.6}

## Anti-Beta 2 Microglobulin Picoband Antibody - 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-Beta 2 Microglobulin Picoband Antibody - Images

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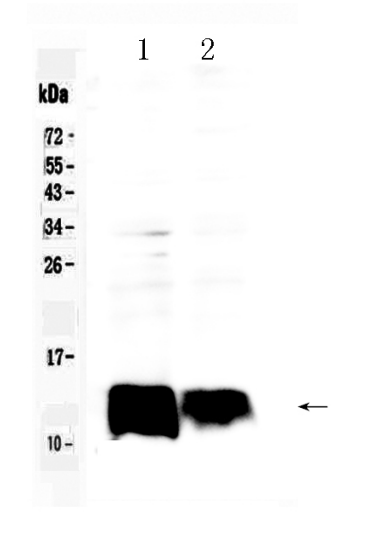



Figure 1. Western blot analysis of Beta 2 Microglobulin using anti-Beta 2 Microglobulin antibody (ABO10078). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: HEPG2 whole Cell lysates, Lane 2: 22RV1 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-Beta 2 Microglobulin antigen affinity purified polyclonal antibody (Catalog # ABO10078) at 0.5 Î¼g/mL overnight at 4Â°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 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Beta 2 Microglobulin at approximately 13KD. The expected band size for Beta 2 Microglobulin is at 13KD.

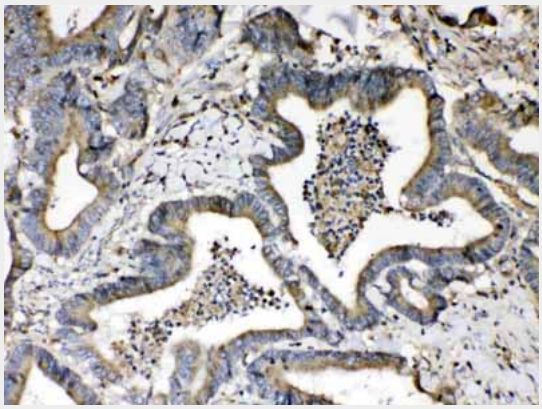


Figure 2. IHC analysis of Beta 2 Microglobulin using anti- Beta 2 Microglobulin antibody (ABO10078).Beta 2 Microglobulin was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti- Beta 2 Microglobulin Antibody (ABO10078) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

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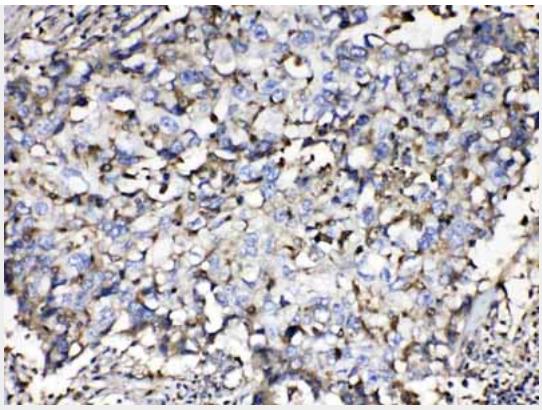


Figure 3. IHC analysis of Beta 2 Microglobulin using anti- Beta 2 Microglobulin antibody (ABO10078).Beta 2 Microglobulin was detected in paraffin-embedded section of human lung cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti- Beta 2 Microglobulin Antibody (ABO10078) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

**Anti-Beta 2 Microglobulin Picoband Antibody - Background**

Beta-2 microglobulin also known as B2M is a component of MHC class I molecules, which are present on all nucleated cells (excludes red blood cells). In humans, the beta-2-microglobulin protein is encoded by the B2M gene. The protein has a predominantly beta-pleated sheet structure that can form amyloid fibrils in some pathological conditions. The encoded antimicrobial protein displays antibacterial activity in amniotic fluid. A mutation in this gene has been shown to result in hypercatabolic hypoproteinemia.