

# Anti-EEF2 Picoband™ Antibody (monoclonal, 5F5)

Catalog # ABO14989

## Product Information

|                          |                                                                                                                                                        |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application</b>       | WB, IHC, IF, ICC, FC                                                                                                                                   |
| <b>Primary Accession</b> | <a href="#">P13639</a>                                                                                                                                 |
| <b>Host</b>              | Mouse                                                                                                                                                  |
| <b>Isotype</b>           | Mouse IgG1                                                                                                                                             |
| <b>Reactivity</b>        | Rat, Human, Mouse                                                                                                                                      |
| <b>Clonality</b>         | Monoclonal                                                                                                                                             |
| <b>Format</b>            | Lyophilized                                                                                                                                            |
| <b>Description</b>       | Anti-EEF2 Picoband™ Antibody (monoclonal, 5F5) . Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. |
| <b>Reconstitution</b>    | Add 0.2ml of distilled water will yield a concentration of 500ug/ml.                                                                                   |

## Additional Information

|                                        |                                                                                                                                                                                                                                                      |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene ID</b>                         | 1938                                                                                                                                                                                                                                                 |
| <b>Other Names</b>                     | Elongation factor 2, EF-2, 3.6.5.-, EEF2, EF2                                                                                                                                                                                                        |
| <b>Calculated MW</b>                   | 95338                                                                                                                                                                                                                                                |
| <b>Application Details</b>             | Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat<br>Immunohistochemistry (Paraffin-embedded Section), 2-5 µg/ml, Human<br>Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human<br>Flow Cytometry, 1-3 µg/1x10 <sup>6</sup> cells, Human, Mouse, Rat |
| <b>Source</b>                          | Eukaryota                                                                                                                                                                                                                                            |
| <b>Contents</b>                        | Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na <sub>2</sub> HPO <sub>4</sub> .                                                                                                                                                            |
| <b>Clone Names</b><br><b>Immunogen</b> | Clone: 5F5<br>A synthetic peptide corresponding to a sequence at the N-terminus of human EEF2/Elongation factor 2, identical to the related mouse and rat sequences.                                                                                 |
| <b>Purification</b>                    | Immunogen affinity purified.                                                                                                                                                                                                                         |
| <b>Storage</b>                         | Store 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 freeze-thaw cycles.                                             |

## Protein Information

|             |      |
|-------------|------|
| <b>Name</b> | EEF2 |
|-------------|------|

## Synonyms

EF2

## Function

Catalyzes the GTP-dependent ribosomal translocation step during translation elongation (PubMed:[26593721](#)). During this step, the ribosome changes from the pre-translocational (PRE) to the post-translocational (POST) state as the newly formed A-site-bound peptidyl- tRNA and P-site-bound deacylated tRNA move to the P and E sites, respectively (PubMed:[26593721](#)). Catalyzes the coordinated movement of the two tRNA molecules, the mRNA and conformational changes in the ribosome (PubMed:[26593721](#)).

## Cellular Location

Cytoplasm. Nucleus. Note=Phosphorylation by CSK promotes cleavage and SUMOylation-dependent nuclear translocation of the C- terminal cleavage product.

## Background

Eukaryotic elongation factor 2 is a protein that in humans is encoded by the *EEF2* gene. This gene encodes a member of the GTP-binding translation elongation factor family. This protein is an essential factor for protein synthesis. It promotes the GTP-dependent translocation of the nascent protein chain from the A-site to the P-site of the ribosome. This protein is completely inactivated by EF-2 kinase phosphorylation.

## Images

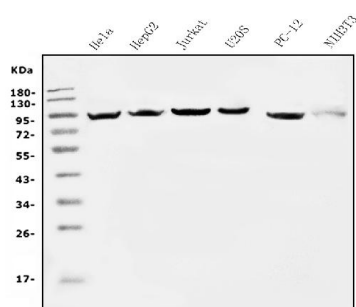


Figure 1. Western blot analysis of EEF2 using anti-EEF2 antibody (M00830-2).

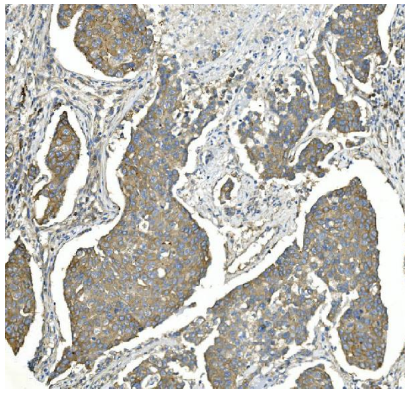
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human HeLa whole cell lysates,  
Lane 2: human HEPG2 whole cell lysates,  
Lane 3: human Jurkat whole cell lysates,  
Lane 4: human U2OS whole cell lysates,  
Lane 5: rat PC-12 whole cell lysates,  
Lane 6: mouse NIH/3T3 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 mouse anti-EEF2 antigen affinity purified monoclonal antibody (Catalog # M00830-2) 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 EEF2 at approximately 95KD. The expected band size for EEF2 is at 95KD.

Figure 2. IHC analysis of EEF2 using anti-EEF2 antibody (M00830-2).

EEF2 was detected in paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated



with 2 µg/ml mouse anti-EEF2 Antibody (M00830-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

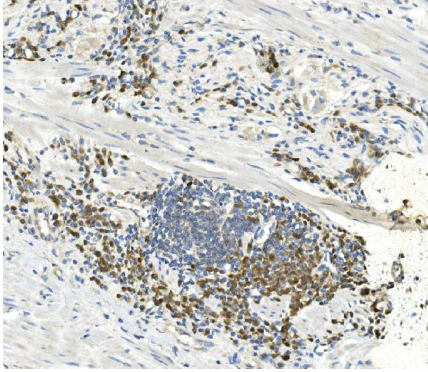


Figure 3. IHC analysis of EEF2 using anti-EEF2 antibody (M00830-2). EEF2 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-EEF2 Antibody (M00830-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

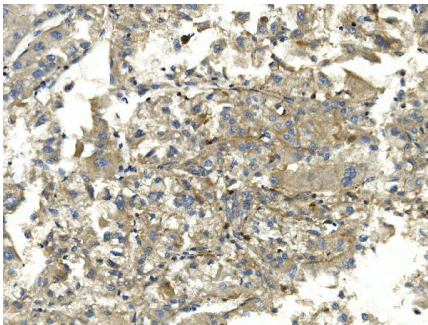


Figure 4. IHC analysis of EEF2 using anti-EEF2 antibody (M00830-2). EEF2 was detected in paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-EEF2 Antibody (M00830-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

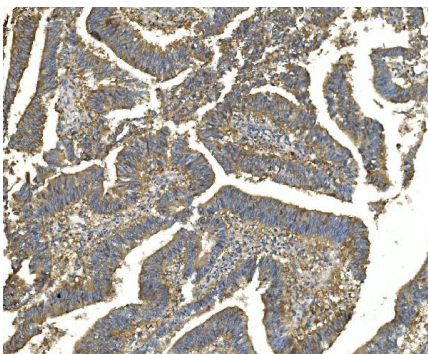
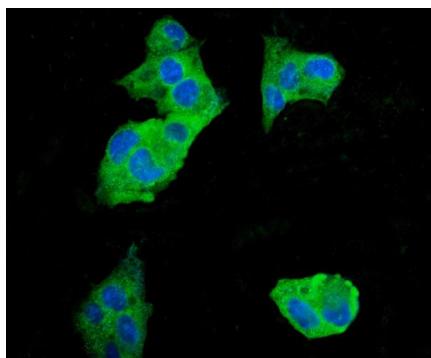


Figure 5. IHC analysis of EEF2 using anti-EEF2 antibody (M00830-2). EEF2 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-EEF2 Antibody (M00830-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

Figure 6. IF analysis of EEF2 using anti-EEF2 antibody (M00830-2). EEF2 was detected in immunocytochemical section of HEPG2 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-EEF2 Antibody (M00830-2) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) 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.

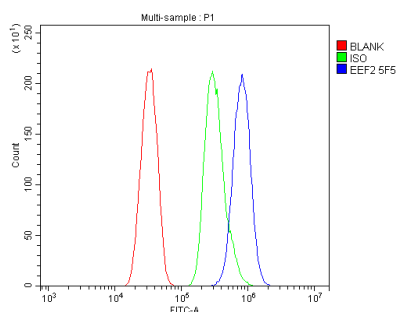


Figure 7. Flow Cytometry analysis of HEPA1-6 cells using anti-EEF2 antibody (M00830-2). Overlay histogram showing HEPA1-6 cells stained with M00830-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-EEF2 Antibody (M00830-2, 1 µg/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

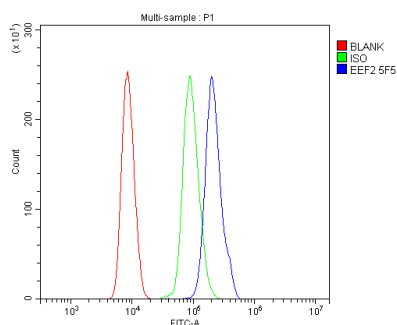


Figure 8. Flow Cytometry analysis of HL-60 cells using anti-EEF2 antibody (M00830-2). Overlay histogram showing HL-60 cells stained with M00830-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-EEF2 Antibody (M00830-2, 1 µg/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

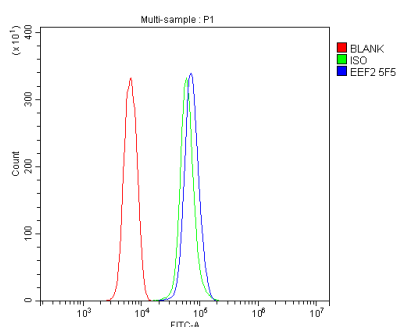


Figure 9. Flow Cytometry analysis of NRK cells using anti-EEF2 antibody (M00830-2). Overlay histogram showing NRK cells stained with M00830-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-EEF2 Antibody (M00830-2, 1 µg/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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