

For Research Use Only

# Beta Actin Recombinant antibody

Catalog Number: 81115-1-RR **747 Publications**



## Basic Information

|  |  |   |
|--|--|---|
| <b>Catalog Number:</b><br>81115-1-RR                           | <b>GenBank Accession Number:</b><br>BC002409 | <b>Purification Method:</b><br>Protein A purification |
| <b>Size:</b><br>100ul , Concentration: 1000 ug/ml by Nanodrop; | <b>GeneID (NCBI):</b><br>60                  | <b>CloneNo.:</b><br>4H1                               |
| <b>Source:</b><br>Rabbit                                       | <b>UNIPROT ID:</b><br>P60709                 | <b>Recommended Dilutions:</b><br>WB: 1:5000-1:50000   |
| <b>Isotype:</b><br>IgG   | <b>Full Name:</b><br>actin, beta             | IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate |
| <b>Immunogen Catalog Number:</b><br>AG14521                    | <b>Calculated MW:</b><br>375 aa, 42 kDa      | IHC: 1:1000-1:4000                                    |
|  | <b>Observed MW:</b><br>42 kDa                | IF/ICC: 1:950-1:3800                                  |

## Applications

|   |  |
|---|--|
| <b>Tested Applications:</b><br>WB, IHC, IF/ICC, IP, ELISA   | <b>Positive Controls:</b>  |
| <b>Cited Applications:</b><br>WB, IF, IP  | <b>WB :</b> HeLa cells, HEK-293 cells, Jurkat cells, HSC-T6 cells, NIH/3T3 cells, rat brain tissue, mouse brain tissue, pig brain tissue |
| <b>Species Specificity:</b><br>human, mouse, rat, pig   | <b>IP :</b> HeLa cells,  |
| <b>Cited Species:</b><br>human, mouse, rat, pig, monkey, chicken, bovine, goat  | <b>IHC :</b> rat colon tissue,   |
| <b>Note-IHC:</b> suggested antigen retrieval with <b>TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0</b> | <b>IF/ICC :</b> U2OS cells, MDCK cells   |

## Background Information

Beta Actin, also named as ACTB and F-Actin, belongs to the actin family. Actins are highly conserved globular proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. At least six isoforms of actins are known in mammals and other vertebrates: alpha (ACTC1, cardiac muscle 1), alpha 1 (ACTA1, skeletal muscle) and 2 (ACTA2, aortic smooth muscle), beta (ACTB), gamma 1 (ACTG1) and 2 (ACTG2, enteric smooth muscle). Beta and gamma 1 are two non-muscle actin proteins. Most actins consist of 376aa, while ACTG2 (rich in muscles) has 375aa and ACTG1(found in non-muscle cells) has only 374aa. Beta actin has been widely used as the internal control in RT-PCR and Western Blotting as a 42-kDa protein. However, the 37-40, 31, 15 kDa cleaved fragment of beta actin can be generated during apoptosis process. This antibody was generated against N-terminal region of human beta actin protein and can cross-react with other actins. (9173887, 11217076, 10229193 )

## Notable Publications

| Author       | Pubmed ID | Journal             | Application |
|--------------|-----------|---------------------|-------------|
| Xin Xu       | 36178722  | Environ Toxicol     | WB          |
| Jiying Hou   | 36077440  | Int J Mol Sci       | WB          |
| Jialiang Luo | 36327873  | Int Immunopharmacol | WB          |

## Storage

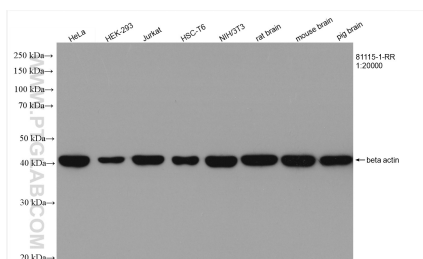
**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol, pH7.3  
**Aliquoting is unnecessary for -20°C storage**

\*\*\* 20ul sizes contain 0.1% BSA

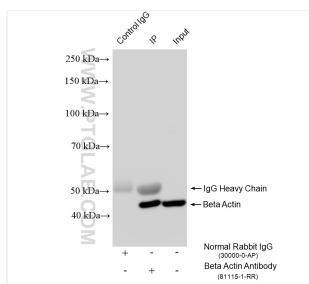
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

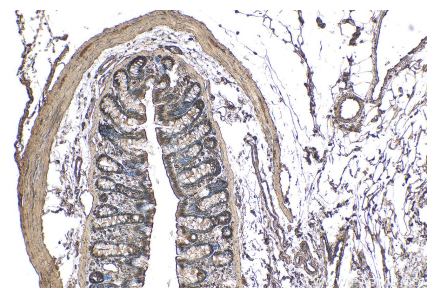
## Selected Validation Data



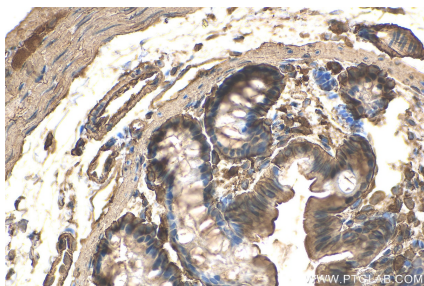
Various lysates were subjected to SDS PAGE followed by western blot with 81115-1-RR (beta actin antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



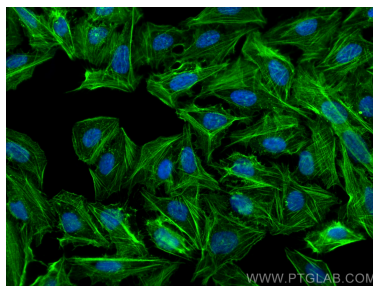
IP result of anti-Beta Actin (IP: 81115-1-RR, 4ug; Detection: 81115-1-RR 1:5000) with HeLa cells lysate 1400 ug.



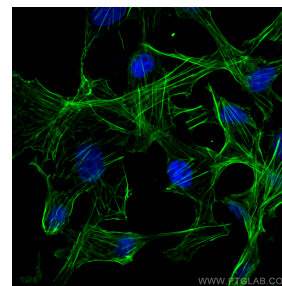
Immunohistochemical analysis of paraffin-embedded rat colon tissue slide using 81115-1-RR (Beta Actin antibody) at dilution of 1:2000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded rat colon tissue slide using 81115-1-RR (Beta Actin antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed U2OS cells using beta actin antibody (81115-1-RR, Clone: 4H1) at dilution of 1:1900 and CoraLite® 488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



Immunofluorescent analysis of (4% PFA) fixed MDCK cells using Beta Actin antibody (81115-1-RR, Clone: 4H1) at dilution of 1:4000 and Multi-rAb CoraLite® Plus 488-Goat Anti-Rabbit Recombinant Secondary Antibody (H+L) (RGAR002).