

BTRC
Purified Mouse Monoclonal Antibody
Catalog # AO2582a

Specification

BTRC - Product Information

Application	E, WB, IHC
Primary Accession	O9Y297
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Calculated MW	68.9kDa KDa

Immunogen

Purified recombinant fragment of human BTRC (AA: 24-151) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

BTRC - Additional Information

Gene ID 8945

Other Names

FWD1; FBW1A; FBXW1; bTrCP; FBXW1A; bTrCP1; betaTrCP; BETA-TRCP

Dilution

E~~ 1/10000
WB~~ 1/500 - 1/2000
IHC~~ 1/200 - 1/1000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

BTRC is for research use only and not for use in diagnostic or therapeutic procedures.

BTRC - Protein Information

Name BTRC

Synonyms BTRCP, FBW1A, FBXW1A

Function

Substrate recognition component of a SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complex which mediates the ubiquitination and subsequent proteasomal degradation of target

proteins (PubMed: [10066435](http://www.uniprot.org/citations/10066435)), PubMed: [10497169](http://www.uniprot.org/citations/10497169), PubMed: [10644755](http://www.uniprot.org/citations/10644755), PubMed: [10835356](http://www.uniprot.org/citations/10835356), PubMed: [11158290](http://www.uniprot.org/citations/11158290), PubMed: [11238952](http://www.uniprot.org/citations/11238952), PubMed: [11359933](http://www.uniprot.org/citations/11359933), PubMed: [11994270](http://www.uniprot.org/citations/11994270), PubMed: [12791267](http://www.uniprot.org/citations/12791267), PubMed: [12902344](http://www.uniprot.org/citations/12902344), PubMed: [14603323](http://www.uniprot.org/citations/14603323), PubMed: [14681206](http://www.uniprot.org/citations/14681206), PubMed: [14988407](http://www.uniprot.org/citations/14988407), PubMed: [15448698](http://www.uniprot.org/citations/15448698), PubMed: [15917222](http://www.uniprot.org/citations/15917222), PubMed: [16371461](http://www.uniprot.org/citations/16371461), PubMed: [22017875](http://www.uniprot.org/citations/22017875), PubMed: [22017876](http://www.uniprot.org/citations/22017876), PubMed: [22017877](http://www.uniprot.org/citations/22017877), PubMed: [22087322](http://www.uniprot.org/citations/22087322), PubMed: [25503564](http://www.uniprot.org/citations/25503564), PubMed: [25704143](http://www.uniprot.org/citations/25704143), PubMed: [36608670](http://www.uniprot.org/citations/36608670), PubMed: [9859996](http://www.uniprot.org/citations/9859996), PubMed: [9990852](http://www.uniprot.org/citations/9990852)). Recognizes and binds to phosphorylated target proteins (PubMed: [10066435](http://www.uniprot.org/citations/10066435), PubMed: [10497169](http://www.uniprot.org/citations/10497169), PubMed: [10644755](http://www.uniprot.org/citations/10644755), PubMed: [10835356](http://www.uniprot.org/citations/10835356), PubMed: [11158290](http://www.uniprot.org/citations/11158290), PubMed: [11238952](http://www.uniprot.org/citations/11238952), PubMed: [11359933](http://www.uniprot.org/citations/11359933), PubMed: [11994270](http://www.uniprot.org/citations/11994270), PubMed: [12791267](http://www.uniprot.org/citations/12791267), PubMed: [12902344](http://www.uniprot.org/citations/12902344), PubMed: [14603323](http://www.uniprot.org/citations/14603323), PubMed: [14681206](http://www.uniprot.org/citations/14681206), PubMed: [14988407](http://www.uniprot.org/citations/14988407), PubMed: [15448698](http://www.uniprot.org/citations/15448698), PubMed: [15917222](http://www.uniprot.org/citations/15917222), PubMed: [16371461](http://www.uniprot.org/citations/16371461), PubMed: [22017875](http://www.uniprot.org/citations/22017875), PubMed: [22017876](http://www.uniprot.org/citations/22017876), PubMed: [22017877](http://www.uniprot.org/citations/22017877), PubMed: [22087322](http://www.uniprot.org/citations/22087322), PubMed: [25503564](http://www.uniprot.org/citations/25503564), PubMed: [25704143](http://www.uniprot.org/citations/25704143), PubMed: [36608670](http://www.uniprot.org/citations/36608670), PubMed: [9859996](http://www.uniprot.org/citations/9859996), PubMed: [9990852](http://www.uniprot.org/citations/9990852)). SCF(BTRC) mediates the ubiquitination of CTNNB1 and participates in Wnt signaling (PubMed: [12077367](http://www.uniprot.org/citations/12077367), PubMed: [12820959](http://www.uniprot.org/citations/12820959)). SCF(BTRC) mediates the ubiquitination of phosphorylated NFKB1, ATF4, CDC25A, DLG1, FBXO5, PER1, SMAD3, SMAD4, SNAI1 and probably NFKB2 (PubMed: [10835356](http://www.uniprot.org/citations/10835356), PubMed: [10835356](http://www.uniprot.org/citations/10835356)).

<http://www.uniprot.org/citations/11238952> target="_blank">11238952, PubMed:14603323, PubMed:14681206). SCF(BTRC) mediates the ubiquitination of NFKBIA, NFKBIB and NFKBIE; the degradation frees the associated NFKB1 to translocate into the nucleus and to activate transcription (PubMed:10066435, PubMed:10497169, PubMed:10644755, PubMed:9859996). Ubiquitination of NFKBIA occurs at 'Lys-21' and 'Lys- 22' (PubMed:10066435). The SCF(FBXW11) complex also regulates NF-kappa- B by mediating ubiquitination of phosphorylated NFKB1: specifically ubiquitinates the p105 form of NFKB1, leading to its degradation (PubMed:10835356, PubMed:11158290, PubMed:14673179). SCF(BTRC) mediates the ubiquitination of CEP68; this is required for centriole separation during mitosis (PubMed:25503564, PubMed:25704143). SCF(BTRC) mediates the ubiquitination and subsequent degradation of nuclear NFE2L1 (By similarity). Has an essential role in the control of the clock- dependent transcription via degradation of phosphorylated PER1 and PER2 (PubMed:15917222). May be involved in ubiquitination and subsequent proteasomal degradation through a DBB1-CUL4 E3 ubiquitin-protein ligase. Required for activation of NFKB-mediated transcription by IL1B, MAP3K14, MAP3K1, IKKB and TNF. Required for proteolytic processing of GLI3 (PubMed:16371461). Mediates ubiquitination of REST, thereby leading to its proteasomal degradation (PubMed:18354482, PubMed:21258371). SCF(BTRC) mediates the ubiquitination and subsequent proteasomal degradation of KLF4; thereby negatively regulating cell pluripotency maintenance and embryogenesis (By similarity). SCF(BTRC) acts as a regulator of mTORC1 signaling pathway by catalyzing ubiquitination and subsequent proteasomal degradation of phosphorylated DEPTOR, TFE3 and MITF (PubMed:22017875, PubMed:22017876, PubMed:22017877, PubMed:33110214, PubMed:36608670). SCF(BTRC) directs 'Lys-48'-linked ubiquitination of UBR2 in the T-cell receptor signaling pathway (PubMed:38225265).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q3ULA2}. Nucleus {ECO:0000250|UniProtKB:Q3ULA2}

Tissue Location

Expressed in epididymis (at protein level).

BTRC - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

BTRC - Images

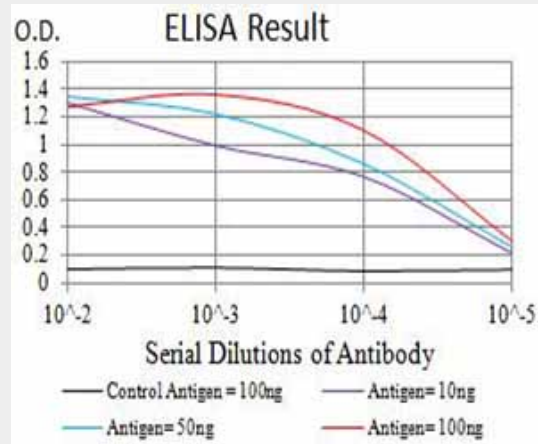


Figure 1: Black line: Control Antigen (100 ng); Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line: Antigen (100 ng)

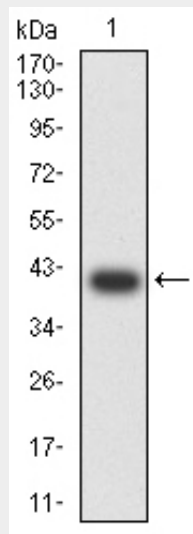


Figure 2: Western blot analysis using BTRC mAb against human BTRC (AA: 24-151) recombinant protein. (Expected MW is 40.2 kDa)

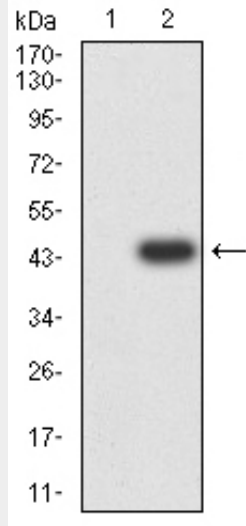


Figure 3:Western blot analysis using BTRC mAb against HEK293 (1) and BTRC (AA: 24-151)-hlgGFc transfected HEK293 (2) cell lysate.

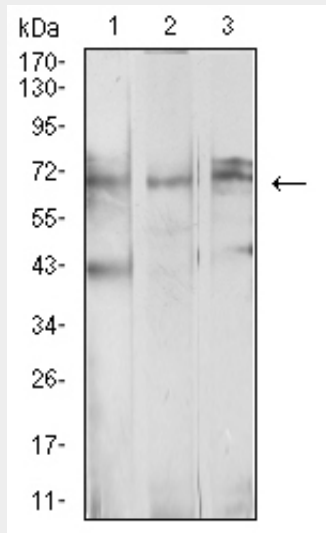


Figure 4:Western blot analysis using BTRC mouse mAb against Ramos (1), MCF-7 (2), and K562 (3) cell lysate.

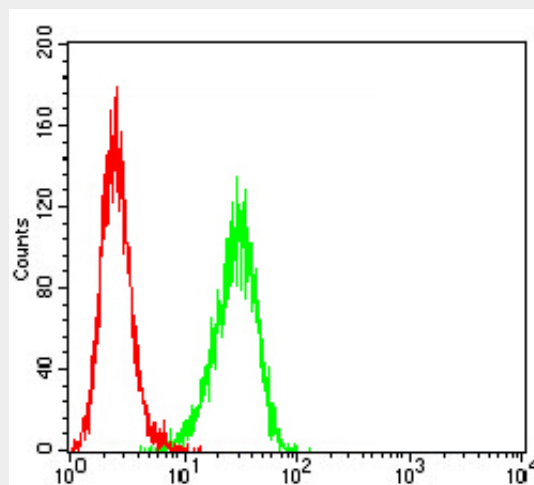


Figure 5:Flow cytometric analysis of Hela cells using BTRC mouse mAb (green) and negative

control (red).

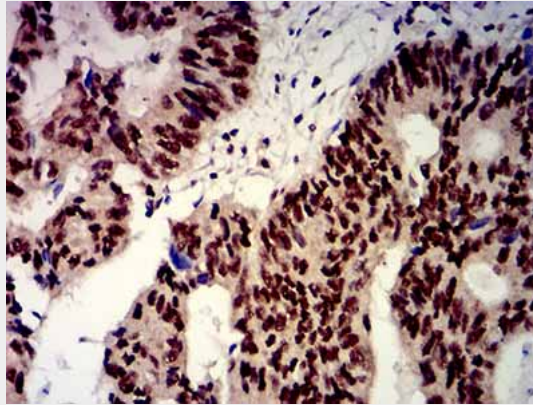


Figure 6: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using BTRC mouse mAb with DAB staining.

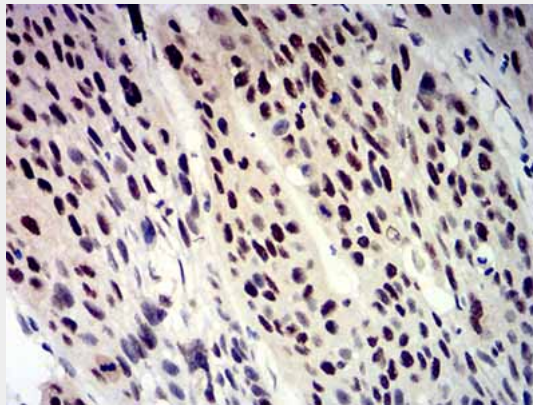


Figure 7: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using BTRC mouse mAb with DAB staining.

BTRC - References

1. J Biol Chem. 2014 Nov 7;289(45):31102-10. 2. Genet Mol Res. 2013 Mar 11;12(3):3435-43.