

BTRC
Purified Mouse Monoclonal Antibody
Catalog # AO2582a

Specification

BTRC - Product Information

Application	E, WB, FCM, 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
FCM~~1/200 - 1/400
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: [9990852](http://www.uniprot.org/citations/9990852), PubMed: [10644755](http://www.uniprot.org/citations/10644755), PubMed: [10835356](http://www.uniprot.org/citations/10835356), PubMed: [11238952](http://www.uniprot.org/citations/11238952), PubMed: [11359933](http://www.uniprot.org/citations/11359933), PubMed: [11158290](http://www.uniprot.org/citations/11158290), 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: [25503564](http://www.uniprot.org/citations/25503564), PubMed: [25704143](http://www.uniprot.org/citations/25704143), PubMed: [9859996](http://www.uniprot.org/citations/9859996), 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: [36608670](http://www.uniprot.org/citations/36608670)). Recognizes and binds to phosphorylated target proteins (PubMed: [10066435](http://www.uniprot.org/citations/10066435), PubMed: [10497169](http://www.uniprot.org/citations/10497169), PubMed: [9990852](http://www.uniprot.org/citations/9990852), PubMed: [10644755](http://www.uniprot.org/citations/10644755), PubMed: [10835356](http://www.uniprot.org/citations/10835356), PubMed: [11238952](http://www.uniprot.org/citations/11238952), PubMed: [11359933](http://www.uniprot.org/citations/11359933), PubMed: [11158290](http://www.uniprot.org/citations/11158290), 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: [25503564](http://www.uniprot.org/citations/25503564), PubMed: [25704143](http://www.uniprot.org/citations/25704143), PubMed: [9859996](http://www.uniprot.org/citations/9859996), 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: [36608670](http://www.uniprot.org/citations/36608670)). 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: [12077367](http://www.uniprot.org/citations/12077367), PubMed: [12820959](http://www.uniprot.org/citations/12820959)).

<http://www.uniprot.org/citations/10835356> target="_blank">10835356, PubMed:11238952, PubMed:14681206, PubMed:14603323). 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:9859996, PubMed:10066435, PubMed:10497169, PubMed:10644755). 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:25704143, PubMed:25503564). 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:21258371, PubMed:18354482). 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).

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

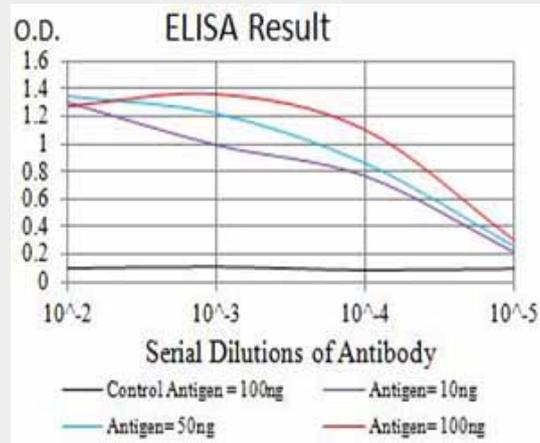


Figure 1: Black line: Control Antigen (100 ng); Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line: Antigen (100 ng)

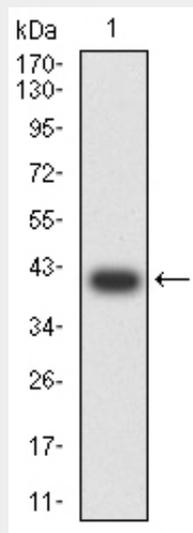


Figure 2: Western blot analysis using BTRC mAb against human BTRC (AA: 24-151) recombinant protein. (Expected MW is 40.2 kDa)

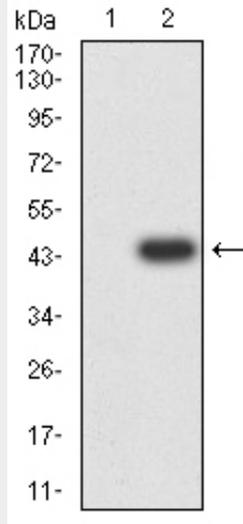


Figure 3:Western blot analysis using BTRC mAb against HEK293 (1) and BTRC (AA: 24-151)-hlgGFc transfected HEK293 (2) cell lysate.

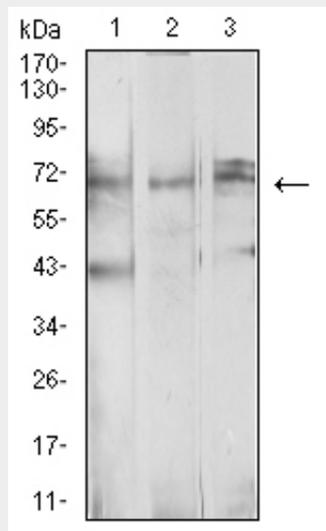


Figure 4:Western blot analysis using BTRC mouse mAb against Ramos (1), MCF-7 (2), and K562 (3) cell lysate.

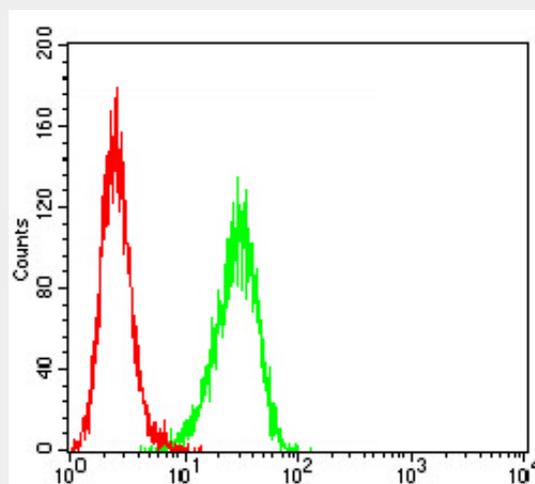


Figure 5:Flow cytometric analysis of Hela cells using BTRC mouse mAb (green) and negative

control (red).

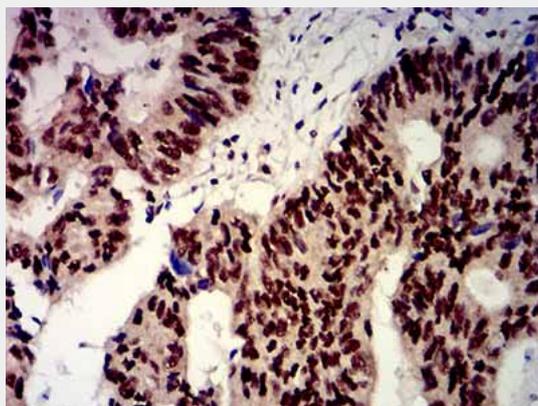


Figure 6: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using BTRC mouse mAb with DAB staining.

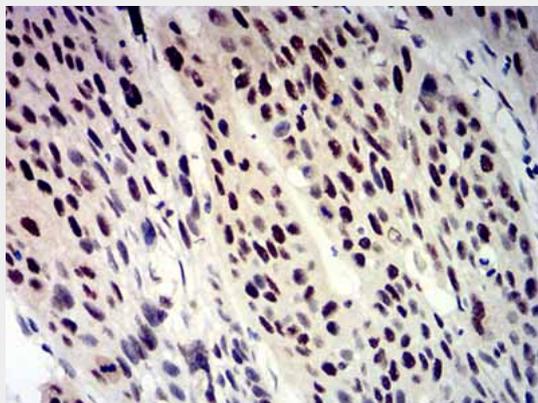


Figure 7: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using BTRC mouse mAb with DAB staining.

BTRC - References

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