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BTRC
Purified Mouse Monoclonal Antibody
Catalog # AO2582a

Specification

BTRC - Product Information

Application	**E, WB, IHC**
Primary Accession	Q9Y297
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, PubMed:10497169, PubMed:10644755, PubMed:10835356, PubMed:11158290, PubMed:11238952, PubMed:11359933, PubMed:11994270, PubMed:12791267, PubMed:12902344, PubMed:14603323, PubMed:14681206, PubMed:14988407, PubMed:15448698, PubMed:15917222, PubMed:16371461, PubMed:22017875, PubMed:22017876, PubMed:22017877, PubMed:22087322, PubMed:25503564, PubMed:25704143, PubMed:36608670, PubMed:9859996, PubMed:9990852). Recognizes and binds to phosphorylated target proteins (PubMed:10066435, PubMed:10497169, PubMed:10644755, PubMed:10835356, PubMed:11158290, PubMed:11238952, PubMed:11359933, PubMed:11994270, PubMed:12791267, PubMed:12902344, PubMed:14603323, PubMed:14681206, PubMed:14988407, PubMed:15448698, PubMed:15917222, PubMed:16371461, PubMed:22017875, PubMed:22017876, PubMed:22017877, PubMed:22087322, PubMed:25503564, PubMed:25704143, PubMed:36608670, PubMed:9859996, PubMed:9990852). SCF(BTRC) mediates the ubiquitination of CTNNB1 and participates in Wnt signaling (PubMed:12077367, PubMed:12820959). SCF(BTRC) mediates the ubiquitination of phosphorylated NFKB1, ATF4, CDC25A, DLG1, FBXO5, PER1, SMAD3, SMAD4, SNAI1 and probably NFKB2 (PubMed:10835356, PubMed:<a

href="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, IKBKB 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 Cytomety
- Cell Culture

BTRC - Images

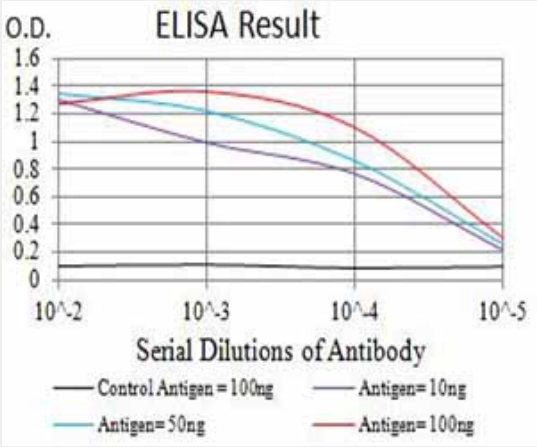

Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

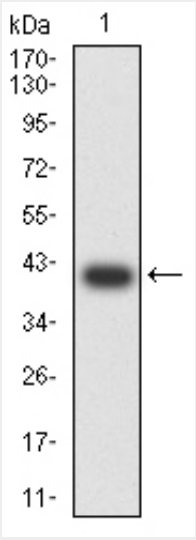

Figure 2:Western blot analysis using BTRC mAb against human BTRC (AA: 24-151) recombinant protein. (Expected MW is 40.2 kDa)

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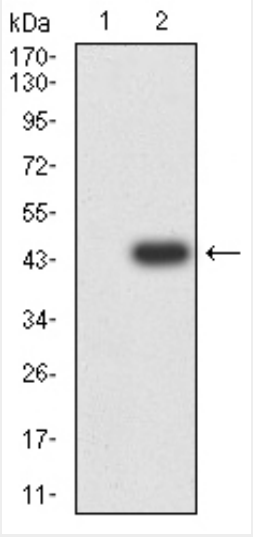

Figure 3:Western blot analysis using BTRC mAb against HEK293 (1) and BTRC (AA: 24-151)-hIgGFc transfected HEK293 (2) cell lysate.

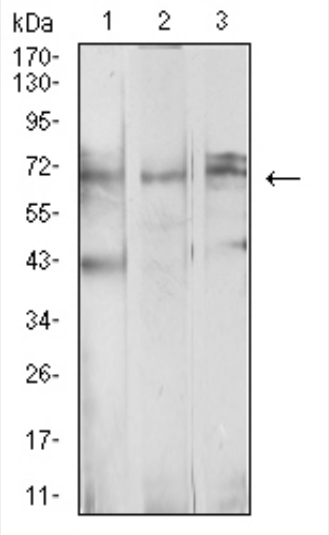

Figure 4:Western blot analysis using BTRC mouse mAb against Ramos (1), MCF-7 (2), and K562 (3) cell lysate.

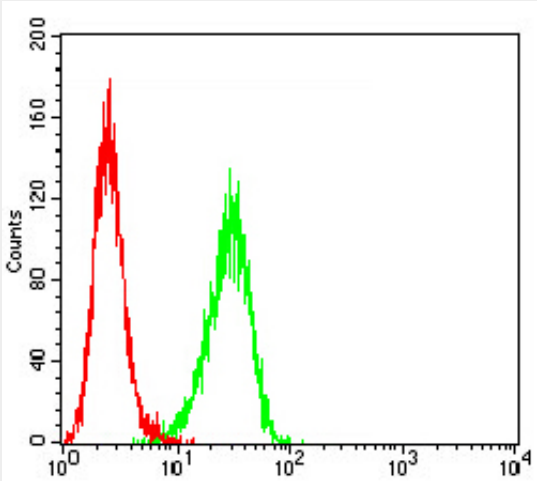

Figure 5:Flow cytometric analysis of Hela cells using BTRC mouse mAb (green) and negative

control (red).

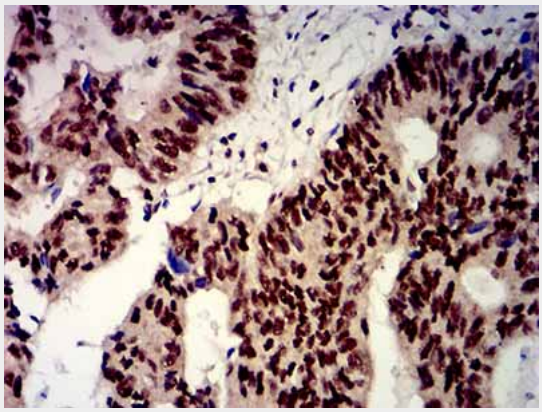

Figure 6:Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using BTRC mouse mAb with DAB staining.

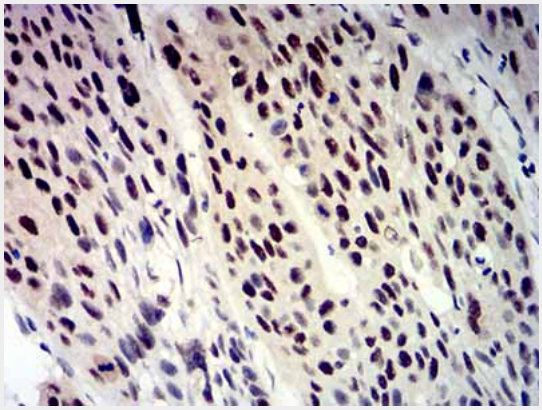

Figure 7:Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using BTRC mouse mAb with DAB staining.

BTRC - References

1.J Biol Chem. 2014 Nov 7;289(45):31102-10.2.Genet Mol Res. 2013 Mar 11;12(3):3435-43.