

BTRC
Purified Mouse Monoclonal Antibody
Catalog # AO2582a**Specification**

BTRC - Product Information

Application	WB, IHC, ICC, E
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

WB~~ 1/500 - 1/2000

IHC~~ 1/200 - 1/1000

ICC~~N/A

E~~ 1/10000

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: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

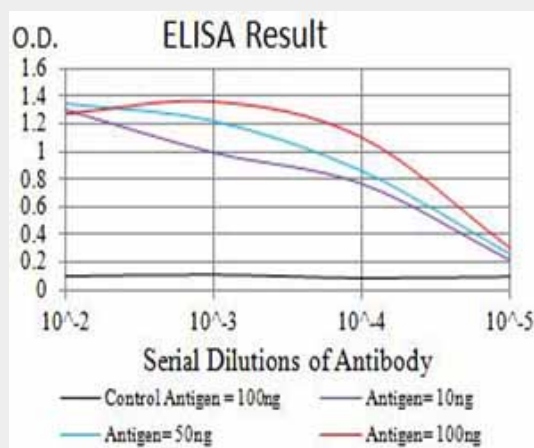


Figure 1: Black line: Control Antigen (100 ng); Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line: Antigen (100 ng)

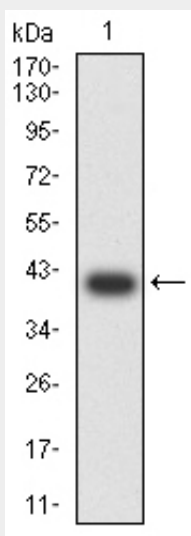


Figure 2: Western blot analysis using BTRC mAb against human BTRC (AA: 24-151) recombinant protein. (Expected MW is 40.2 kDa)

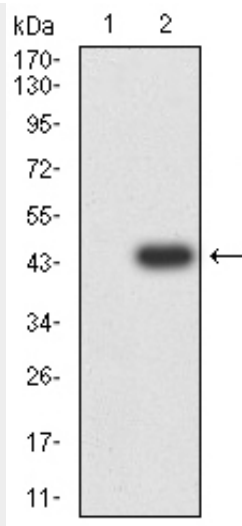


Figure 3: Western blot analysis using BTRC mAb against HEK293 (1) and BTRC (AA: 24-151)-hlgGFc transfected HEK293 (2) cell lysate.

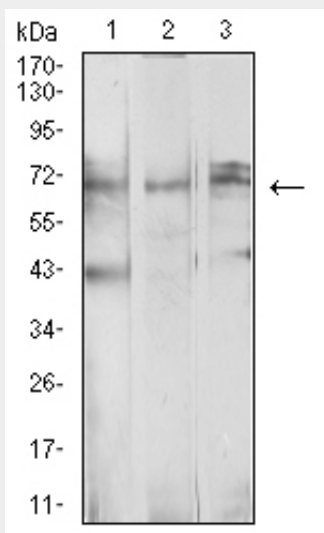


Figure 4: Western blot analysis using BTRC mouse mAb against Ramos (1), MCF-7 (2), and K562 (3) cell lysate.

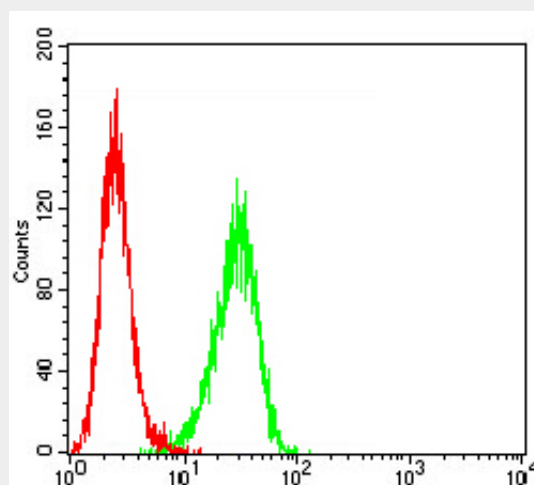


Figure 5: Flow cytometric analysis of Hela cells using BTRC mouse mAb (green) and negative

control (red).

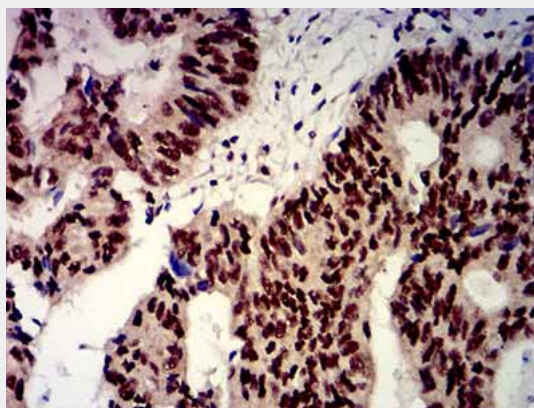


Figure 6:Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using BTRC mouse mAb with DAB staining.

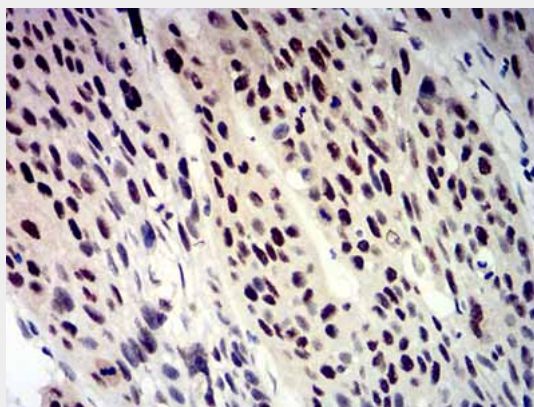


Figure 7:Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using BTRC mouse mAb with DAB staining.

BTRC - References

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