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BTRC

Purified Mouse Monoclonal Antibody
Catalog # AO2582a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	Q9Y297
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4C5D8
Isotype	Mouse IgG1
Calculated MW	68867
Immunogen	Purified recombinant fragment of human BTRC (AA: 24-151) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

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.

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, IKBKB and TNF. SCF(BTRC) acts as a negative regulator of smoothened signaling by mediating ubiquitination of GLI2 and GLI3 in absence of smoothened, promoting their processing into transcription repressors (PubMed:16705181, 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).

References

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

Images

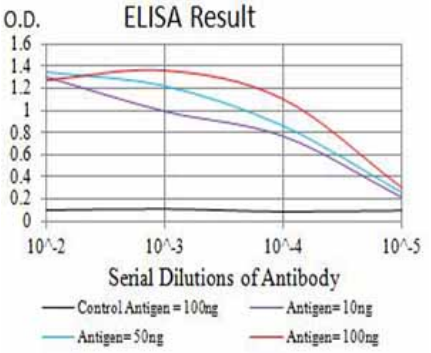


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

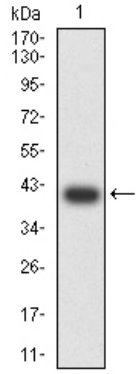


Figure 2:Western blot analysis using BTRC mAb against human BTRC (AA: 24-151) recombinant protein. (Expected MW is 40.2 kDa)

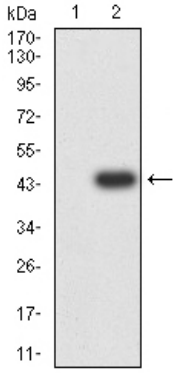


Figure 3:Western blot analysis using BTRC mAb against HEK293 (1) and BTRC (AA: 24-151)-hIgGFc transfected HEK293 (2) cell lysate.

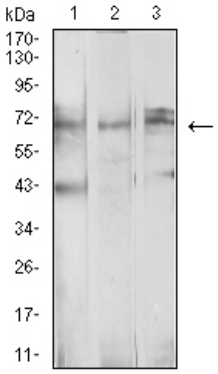
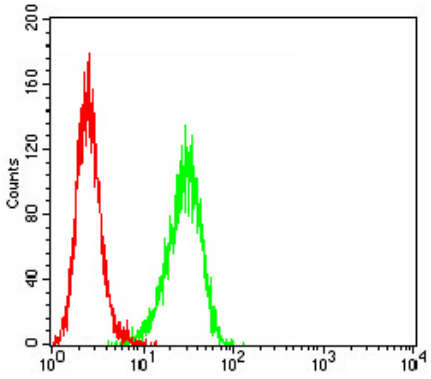


Figure 4:Western blot analysis using BTRC mouse mAb against Ramos (1), MCF-7 (2), and K562 (3) cell lysate.

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



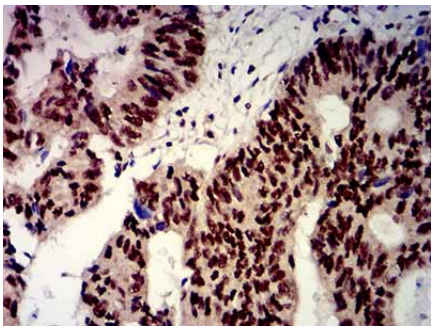


Figure 6:Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using BTRC mouse mAb with DAB staining.

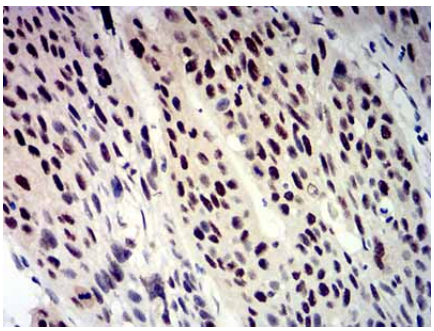


Figure 7:Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using BTRC mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.