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Anti-beta-TrCP Antibody

Catalog # AP95709

Product Information

Application	WB, IHC, FC
Primary Accession	Q9Y297
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	68867

Additional Information

Gene ID	8945
Other Names	BTRCP; FBW1A; FBXW1A; F-box/WD repeat-containing protein 1A; E3RSIkappaB; Epididymis tissue protein Li 2a; F-box and WD repeats protein beta-TrCP; pIkappaBalpha-E3 receptor subunit
Target/Specificity	Recombinant fusion protein of human beta-TrCP expressed in E. Coli
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~FC (1/100 - 1/200)
Format	Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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

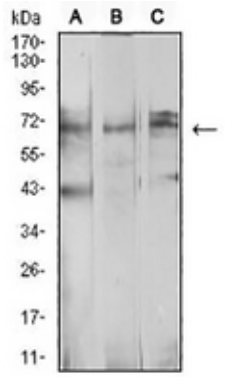
Cytoplasm {ECO:0000250|UniProtKB:Q3ULA2}. Nucleus {ECO:0000250|UniProtKB:Q3ULA2}

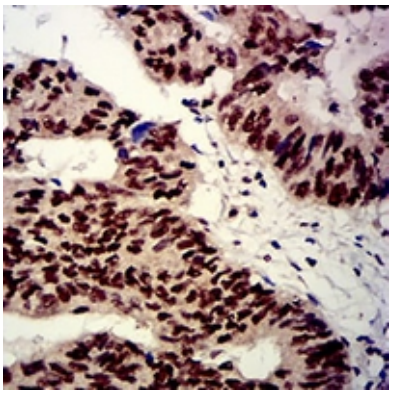
Tissue Location

Expressed in epididymis (at protein level).

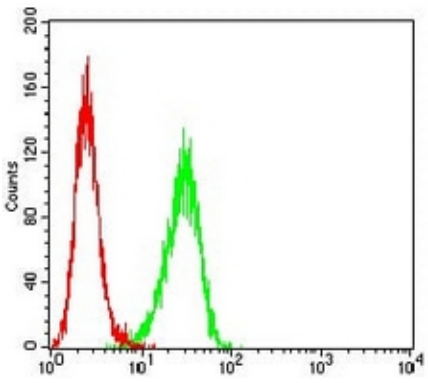
Images

Western blot analysis of beta-TrCP expression in Ramos (A), MCF7 (B), K562 (C) whole cell lysates. (Predicted band size: 69 kD; Observed band size: 69 kD)





Immunohistochemical analysis of beta-TrCP staining in human esophageal cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Flow cytometric analysis of HeLa cells using Anti-beta-TrCP Antibody (green) and negative control (red).

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