

## PRODUCT INFORMATION

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**Product name :** BTRC antibody

**Product type :** Primary antibodies

**Description :** Mouse monoclonal to BTRC

**Immunogen :** 1 synthetic peptide (human) conjugated to KLH

**Reacts with :** Hu, Ms

**Tested applications :** ELISA, WB & IF

## GENE INFORMATION

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**Gene Symbol :** BTRC

**Gene Name :** beta-transducin repeat containing E3 ubiquitin protein ligase

**Ensembl ID :** ENSG00000166167

**Entrez GeneID :** 8945

**GenBank Accession number :** Y14153

**Swiss-Prot :** Q9Y297

**Molecular weight :** 68.9kDa

**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. Recognizes and binds to phosphorylated target proteins. SCF(BTRC) mediates the ubiquitination of CTNNB1 and participates in Wnt signaling. 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. Ubiquitination of NFKBIA occurs at 'Lys-21' and 'Lys-22'. SCF(BTRC) mediates the ubiquitination of phosphorylated NFKB1/nuclear factor NF-kappa-B p105 subunit, ATF4, SMAD3, SMAD4, CDC25A, DLG1, FBXO5 and probably NFKB2. SCF(BTRC) mediates the ubiquitination of phosphorylated SNAI1. 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, IKKBK and TNF. Required for proteolytic processing of GLI3.

**Expected subcellular localization :** Nucleus. Cytoplasm.

**Expected tissue specificity :** Expressed in epididymis (at protein level).

**Summary :** This gene encodes a member of the F-box protein family which is characterized by an approximately 40 amino acid motif, the F-box. The F-box proteins constitute one of the four subunits of ubiquitin protein ligase complex called SCFs (SKP1-cullin-F-box), which function in phosphorylation-dependent ubiquitination. The F-box proteins are divided into 3 classes: Fbws containing WD-40 domains, Fbls containing leucine-rich repeats, and Fbxs

containing either different protein-protein interaction modules or no recognizable motifs. The protein encoded by this gene belongs to the F-box class; in addition to an F-box, this protein contains multiple WD-40 repeats. The encoded protein mediates degradation of CD4 via its interaction with HIV-1 Vpu. It has also been shown to ubiquitinate phosphorylated NFKBIA (nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha), targeting it for degradation and thus activating nuclear factor kappa-B. Alternatively spliced transcript variants have been described. A related pseudogene exists in chromosome 6. [provided by RefSeq]

## **APPLICATION NOTE**

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### **Recommended dilution :**

- **ELISA:** Antibody specificity was verified by direct ELISA against the 1 immunogen peptide. A titer of 16000 has been determined. Appropriate specificity controls were run.
- **WB:** Dilution 1/1000
- **IF:** Dilution 1/10

**Optimal dilutions/concentration should be determined by the end user.**

**Raised in :** Mouse

**Clonality :** Monoclonal

**Isotype :** IgG

**Purity :** Purified Antibody

**Storage buffer :** Containing a final concentration of PBS/glycerol (V/V), 0.1% BSA and 0.01% Thimerosal.

**Form :** Liquid

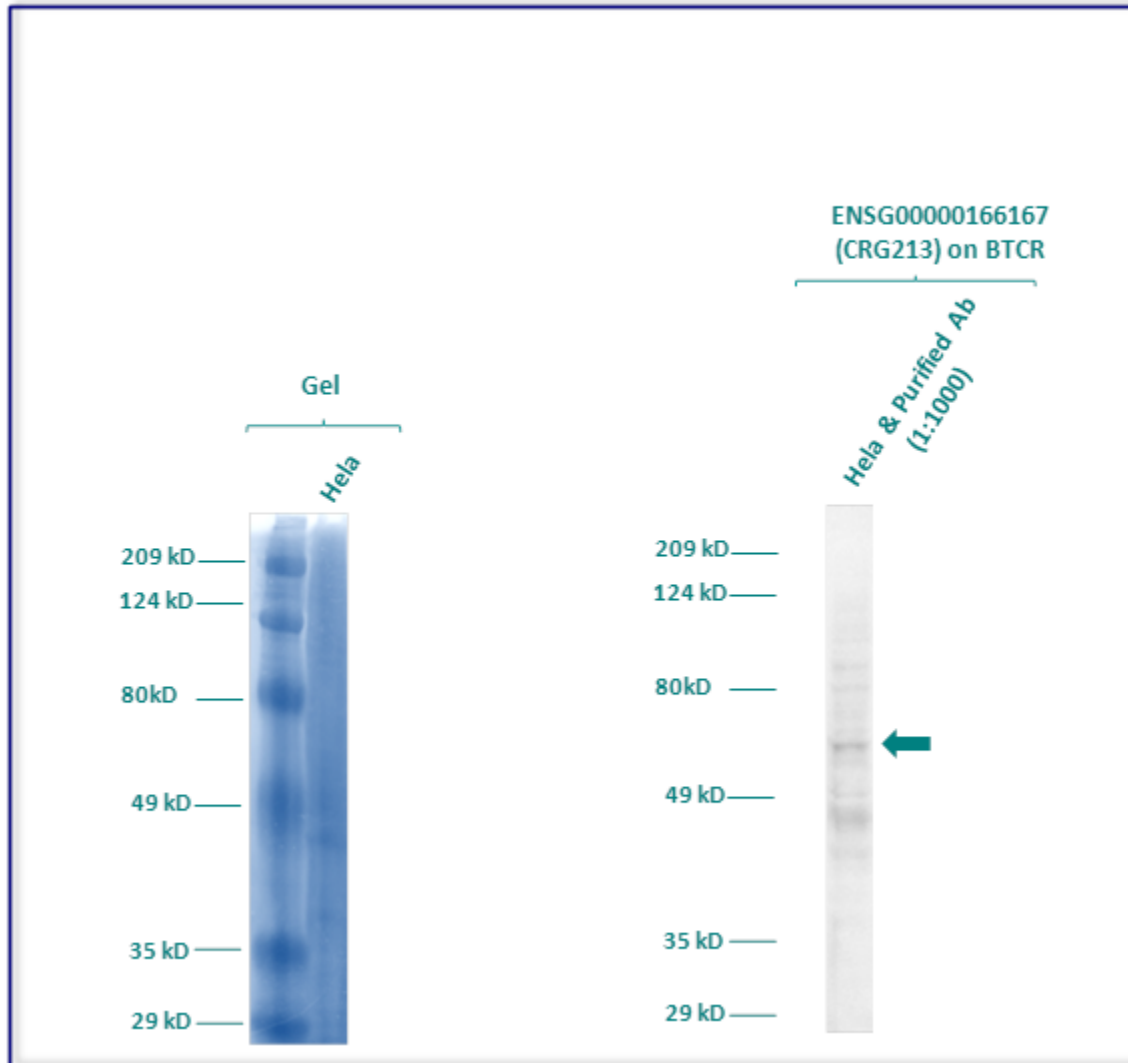
**Storage instruction :** Store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

## WESTERN BLOT ON RECOMBINANT PROTEIN

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Western blot analysis of BCR expression in protein extract of HeLa (Human cervix adenocarcinoma) cell line. The purified monoclonal antibody ENSG00000166167 has been tested at 1/1000.

**Molecular weight of BCR : 69 kDa**



**Gel concentration: 10%**

**Blocking: in 5% non-fat milk-PBST solution**

**1<sup>st</sup> Antibody: The antibodies are diluted in blocking buffer.**

- Dilute the purified antibody ENSG00000166167 at 1:1000
- 60 minutes of incubation**

**2<sup>nd</sup> Antibody: The antibody is diluted in blocking buffer.**

- Dilute the anti-Mouse IgG HRP conjugated at 1/20000
- 60 minutes of incubation**

## IMMUNOFLUORESCENCE ANALYSIS

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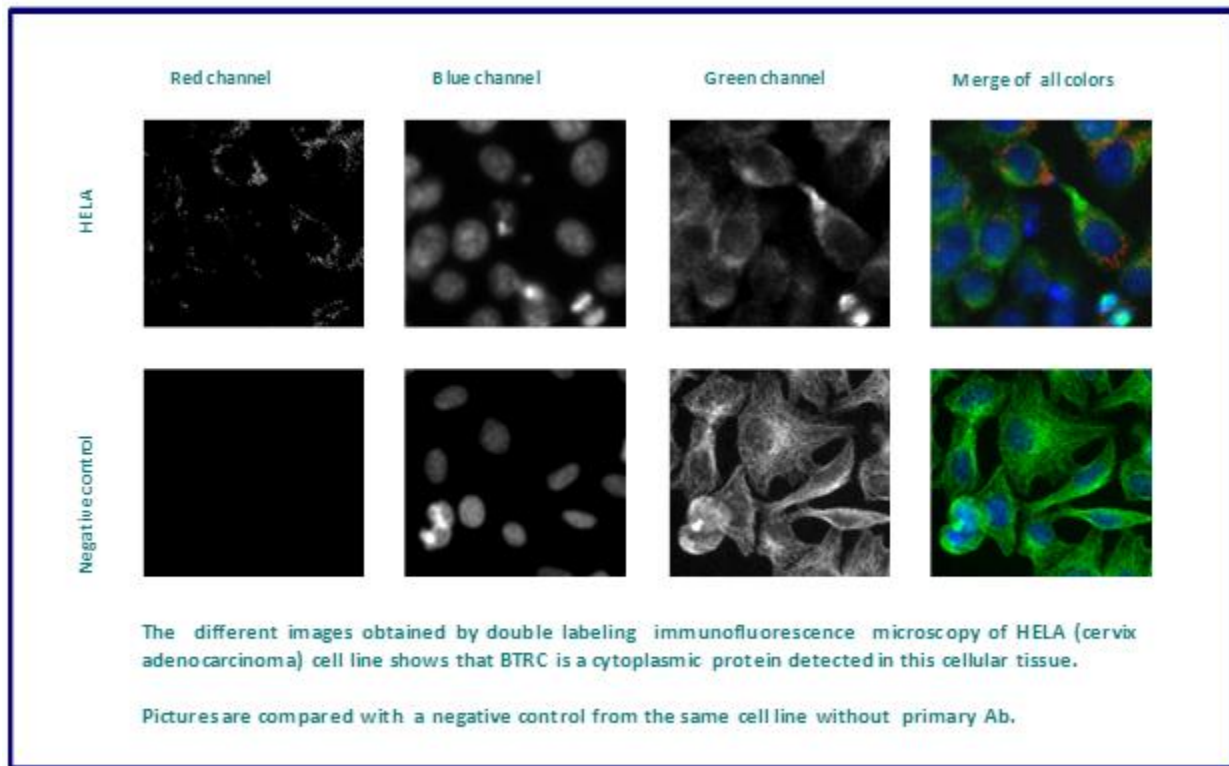
**Immunofluorescence analysis of F-box/WD repeat-containing protein 1A (BTRC) expression in 6 cells lines (HELA, 293T/17, SAOS-2, SH-SY5Y, Skin 3,44). The monoclonal antibody ENSG00000166167 has been tested at 1/10.**

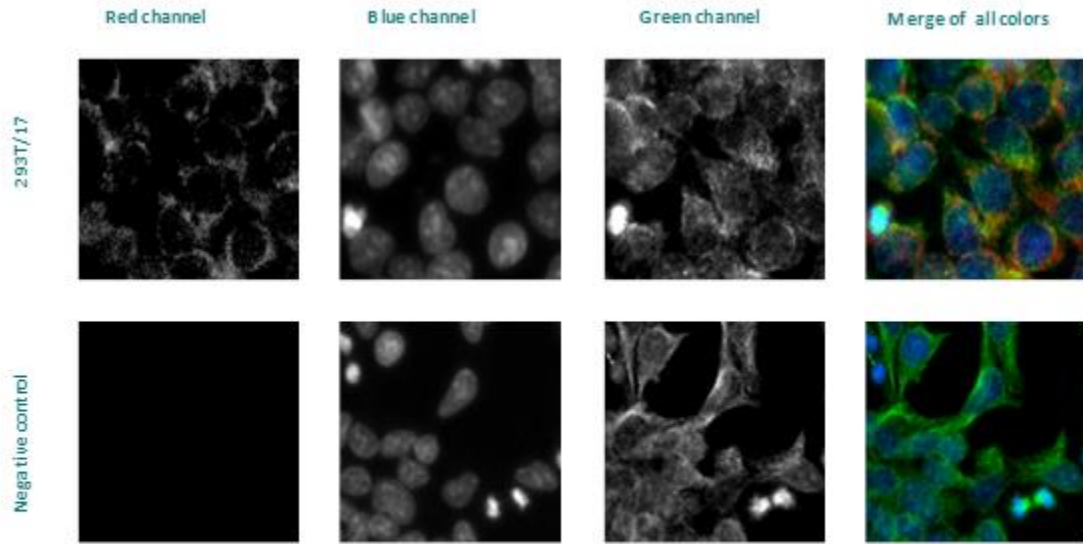
**Red staining : cytoskeleton (microtubules/ $\alpha$ -tubuline)**

**Blue staining : nucleus (Hoechst)**

**Green staining : anti- BTRC antibody (purified)**

**Expected subcellular location : Cytoplasm. Nucleus**





The different images obtained by double labeling immunofluorescence microscopy of 293T/17 (kidney embryonic) cell line shows that BTRC is a cytoplasmic protein detected in this cellular tissue.

Pictures are compared with a negative control from the same cell line without primary Ab.

Remaining cell lines tested gave a negative result under these conditions, except CAPAN-2 that gave a positive result with a cytoplasmic distribution.