

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BetaTrCP1 isoform 2 in direct ELISAs and Western blots. Detects mouse BetaTrCP1 in Western Blots. Detection of mouse BetaTrCP1 in Immunocytochemistry has not been tested.
Source	Monoclonal Mouse IgG ₁ Clone # 763524
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human β -TrCP1 isoform 2 Met1-Leu120 Accession # Q9Y297-2
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μ m filtered solution in PBS.

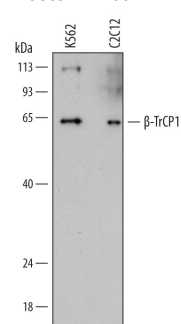
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 μ g/mL	See Below
Immunocytochemistry	8-25 μ g/mL	See Below
Simple Western	10 μ g/mL	See Below

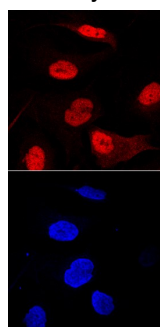
DATA

Western Blot



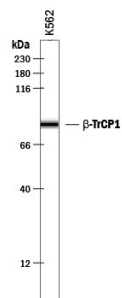
Detection of Human and Mouse β -TrCP1/BTRC by Western Blot. Western blot shows lysates of K562 human chronic myelogenous leukemia cell line and C2C12 mouse myoblast cell line. PVDF membrane was probed with 1 μ g/mL of Mouse Anti-Human β -TrCP1/BTRC Monoclonal Antibody (Catalog # MAB7675) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for β -TrCP1/BTRC at approximately 62 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



β -TrCP1/BTRC in A172 Human Cell Line. β -TrCP1/BTRC was detected in immersion fixed A172 human glioblastoma cell line using Mouse Anti-Human β -TrCP1/BTRC Monoclonal Antibody (Catalog # MAB7675) at 10 μ g/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red, upper panel; Catalog # NL007) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Simple Western



Detection of Human β -TrCP1/BTRC by Simple Western™. Simple Western lane view shows lysates of K562 human chronic myelogenous leukemia cell line, loaded at 0.5 mg/mL. A specific band was detected for β -TrCP1/BTRC at approximately 84 kDa (as indicated) using 10 μ g/mL of Mouse Anti-Human β -TrCP1/BTRC Monoclonal Antibody (Catalog # MAB7675). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

β -TrCP1, also called BTRC (β -transducin repeat containing E3 ubiquitin ligase), FBW1A (F-box/WD repeat containing 1A) and FBXW1A, is an approximately 63-70 kDa protein that associates with Skp1, Cullin, and RBX1 to form an SCF ubiquitin ligase complex. These complexes regulate the degradation of a wide variety of proteins including transcription factors, signal transduction molecules, and cytokine receptors. They play important roles in regulation of the inflammatory response, cell cycle, apoptosis, tumorigenesis, and the response to DNA damage. β -TrCP1 can form homodimers and heterodimers with β -TrCP2, which associate into SCF complexes with distinct substrate preferences. Human β -TrCP1 contains a dimerization domain (aa 128-177), an F-box domain (aa 181-228), and seven tandem WD repeats (aa 301-590). The WD repeats assemble into a beta propeller structure that binds to phosphorylated destruction motifs in the substrate. Alternate splicing generates a short isoform with a 36 aa deletion near the N-terminus. Within aa 1-120 of the 63 kDa short isoform, human β -TrCP1 shares 98% and 91% aa sequence identity with mouse and rat β -TrCP1, respectively.