

# TCP1 beta Rabbit pAb

TCP1 beta Rabbit pAb Catalog # AP54438

#### **Product Information**

**Application** WB, IHC-P, IHC-F, IF

Primary Accession P78371

**Reactivity** Pig, Human, Rabbit, Zebrafish, Chicken, Dog, Horse

Host Rabbit
Clonality Polyclonal
Calculated MW 57488
Physical State Liquid

Immunogen KLH conjugated synthetic peptide derived from human CCT2

Epitope Specificity 131-230/535

**Isotype** IgG

**Purity** affinity purified by Protein A

**Buffer** 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.

**SUBCELLULAR LOCATION** Cytoplasm.

**SIMILARITY** Belongs to the TCP-1 chaperonin family.

**SUBUNIT** Heterooligomeric complex of about 850 to 900 kDa that forms two stacked

rings, 12 to 16 nm in diameter. Interacts with PACRG. Component of the BBS/CCT complex composed at least of MKKS, BBS10, BBS12, TCP1, CCT2,

CCT3, CCT4, CCT5 AND CCT8.

**Important Note** This product as supplied is intended for research use only, not for use in

human, therapeutic or diagnostic applications.

**Background Descriptions** CCT2 is one of eight largely unrelated subunit proteins found in a protein

chaperone complex known as the chaperonin-containing TCP-1 (CCT) or TRiC complex. The CCT complex is an abundanct cytoslic component that is credited with helping newly synthesized polypeptides adopt the correct conformation (1). Proteins that fold and assemble with the help of CCT include the cytoskeletal proteins actin and tubulin as well as up to 15% of newly synthesized eukaryotic proteins (2). CCT2 is the  $\beta$ -subunit of the chaperone complex and is one of several CCT proteins that exhibit increased

expression in response to stress. This implies that the CCT complex helps cells recover from protein damage by assisting in protein folding and assembly (3). CCT subunit levels also change throughout the cell cycle, with lower proteins levels (and reduced chaperone activity) found during induced cell cycle arrest during at M phase (4). Each CCT subunit is thought to perform a specific

function during protein folding and assembly (5); CCT2 exhibits both actin and tubulin binding activities (6,3) but the exact molecular function on this

subunit remains uncertain.

# **Additional Information**

**Gene ID** 10576

Other Names T-complex protein 1 subunit beta, TCP-1-beta, 3.6.1.-, CCT-beta

{ECO:0000312|MIM:605139}, Chaperonin containing T-complex polypeptide 1

subunit 2 {ECO:0000312 | MIM:605139}, CCT2

{ECO:0000303|PubMed:25467444, ECO:0000312|HGNC:HGNC:1615}

**Dilution** WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500

**Storage** Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When

reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

#### **Protein Information**

Name CCT2 {ECO:0000303 | PubMed:25467444, ECO:0000312 | HGNC:HGNC:1615}

**Function** Component of the chaperonin-containing T-complex (TRiC), a molecular

chaperone complex that assists the folding of actin, tubulin and other proteins upon ATP hydrolysis (PubMed:25467444, PubMed:36493755, PubMed:35449234, PubMed:37193829). The TRiC complex mediates the folding of WRAP53/TCAB1, thereby regulating telomere maintenance (PubMed:25467444). As part of the TRiC complex may play a role in the assembly of BBSome, a complex involved in ciliogenesis regulating transports

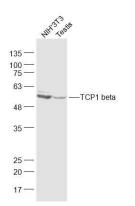
vesicles to the cilia (PubMed: 20080638).

Cellular Location Cytoplasm.

## **Background**

CCT2 is one of eight largely unrelated subunit proteins found in a protein chaperone complex known as the chaperonin-containing TCP-1 (CCT) or TRiC complex. The CCT complex is an abundanct cytoslic component that is credited with helping newly synthesized polypeptides adopt the correct conformation (1). Proteins that fold and assemble with the help of CCT include the cytoskeletal proteins actin and tubulin as well as up to 15% of newly synthesized eukaryotic proteins (2). CCT2 is the  $\beta$ -subunit of the chaperone complex and is one of several CCT proteins that exhibit increased expression in response to stress. This implies that the CCT complex helps cells recover from protein damage by assisting in protein folding and assembly (3). CCT subunit levels also change throughout the cell cycle, with lower proteins levels (and reduced chaperone activity) found during induced cell cycle arrest during at M phase (4). Each CCT subunit is thought to perform a specific function during protein folding and assembly (5); CCT2 exhibits both actin and tubulin binding activities (6,3) but the exact molecular function on this subunit remains uncertain.

## **Images**



Sample:

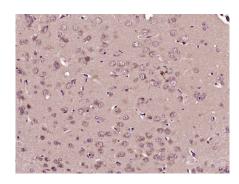
NIH/3T3(Mouse) Cell Lysate at 30 ug

Testis (Mouse) Lysate at 40 ug

Primary: Anti-TCP1 beta (AP54438) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000

dilution

Predicted band size: 57 kD Observed band size: 57 kD



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TCP1 beta) Polyclonal Antibody, Unconjugated (AP54438) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

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