

Product Specification Sheet

TAB182 (Tankyrase-binding protein of 182 kDa) Antibodies

Cat. # TAB182-P	Human TAB182 Control/blocking Peptide #1	SIZE: 100 ug
Cat. # TAB182-S	Rabbit Anti-Human TAB182 antiserum #1	SIZE: 100 ul
Cat. # TAB182-A	Rabbit Anti-Human TAB182 IgG # 1 (aff pure)	SIZE: 100 ug

Tankyrases (TRF1 interacting ankyrin-related ADP-ribose polymerase; human 1327 aa, **renamed as TNKS-1/TANK1**, chromosome 8, and its homolog TANK2), a modular protein with homology to ankyrin and poly(adenosine diphosphate-ribose) polymerase (PARP) has been cloned and localized to telomere. In addition to regulating the telomere and nuclear localization, TANKs also resides at the other subcellular compartments such as nuclear envelope, specifically on cytoplasmic fibers of nuclear pore complexes. TANK1 is targeted to pericentriolar domain of centrosomes during mitosis. After mitosis, TANK1 associates with the golgi as a peripheral membrane protein and implicated in targeting of GLUT4 vesicles. In the absence of insulin, GLUT4 vesicles reside in the Golgi and cytoplasm. Upon stimulation by insulin, GLUT4 vesicles undergo exocytosis and translocate to the plasma membrane. GLUT4 vesicles are characterized by the presence of glucose transporter 4 (GLUT4) and **IRAP (Insulin regulated aminopeptidase)**. The exocytosis of GLUT4 vesicles is therefore plays an important role in uptake of glucose through Glut4 and the degradation of various vasoactive hormones by IRAP. TANKs have been colocalized in GLUT4 vesicles and shown to bind IRAP via the ANK-repeats.

A novel TANK1-binding protein termed **TAB182** (tankyrase-binding protein of 182 kDa), which binds to the ANK domain of TANK1 and TANK2 has been identified. TAB182 (human 1729 aa, predicted size 182 kDa, actual size ~200 kDa) is expressed in heart, lung, liver, kidney, pancreas, testis, ovary etc. TAB182 localizes to nucleus and to the cytoplasm, where it co localizes with cortical actin network. It serves as an acceptor of poly(ADP-ribosylation) by TANK1. TANK1 is suggested to act as scaffold for large molecular mass complexes made up of multiple binding proteins.

SUBUNIT: Binds to the ANK repeat domain of TNKS1 and TNKS2.

SUBCELLULAR LOCATION: Nucleus. Cytoplasm. Note=Colocalizes with chromosomes during mitosis, and in the cytoplasm with cortical actin.

ALTERNATIVE PRODUCTS: 2 named isoforms produced by alternative splicing. Isoform 1 (1782 aa) and isoforms 2 (778 aa; missing 1-549 aa; 1328 1729, changed 1275-1327).

Source of Antigen, Antibodies, and Positive Controls

Antigen	15-aa peptide of human/mouse TAB182 (protein accession # Q9C0C2 TAPB, refs 1) ; Designated (HO22-P or control peptide) conjugated to KLH; Epitope ~CT
Ab Host/type	Rabbit, Polyclonal antiserum # TAB182-S and IgG, purified over antigen-agarose (Cat # TAB182-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C..

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique). TAB ~200 kDa

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified ab at 2-20 ug/ml.

Specificity & Cross-reactivity

The TAB182 control peptide sequence is 100% conserved in mouse and human Tab182/ KIAA1741 isoform 1 but missing in isoforms 2. Antibody crossreactivity in various species is not established. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity
General References: (1) Seimiya H et al (2002) JBC 277, 14116-14126;

*This product is for In vitro research use only.

Related material available from ADI

Antibodies TANK1/2, TRF1-2, TP1, Est2, GRBP14, Tab182, Glut4

TAB182-S-A-P

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