

**TERF2 Antibody**  
**Catalog # ASC11776****Specification**

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**TERF2 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">Q15554</a>
Other Accession	<a href="#">NP_005643</a> , <a href="#">429535832</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 60 kDa

Application Notes	<b>Observed: 69 kDa KDa</b> <b>TERF2 antibody can be used for detection of TERF2 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry at 5 µg/mL.</b>
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**TERF2 Antibody - Additional Information**

Gene ID	<b>7014</b>
<b>Target/Specificity</b>	
TERF2; TERF2 antibody is human specific.	

**Reconstitution & Storage**

TERF2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

TERF2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**TERF2 Antibody - Protein Information**

**Name** TERF2

**Synonyms** TRBF2, TRF2

**Function**

Binds the telomeric double-stranded 5'-TTAGGG-3' repeat and plays a central role in telomere maintenance and protection against end-to-end fusion of chromosomes. In addition to its telomeric DNA- binding role, required to recruit a number of factors and enzymes required for telomere protection, including the shelterin complex, TERF2IP/RAP1 and DCLRE1B/Apollo. Component of the shelterin complex (telosome) that is involved in the regulation of telomere length and protection. Shelterin associates with arrays of double-stranded 5'- TTAGGG-3' repeats added by telomerase and protects chromosome ends; without its protective activity, telomeres are no longer hidden from the DNA damage surveillance and chromosome ends are inappropriately processed by DNA repair pathways. Together with DCLRE1B/Apollo, plays a key role in telomeric loop (T loop)

formation by generating 3' single-stranded overhang at the leading end telomeres: T loops have been proposed to protect chromosome ends from degradation and repair. Required both to recruit DCLRE1B/Apollo to telomeres and activate the exonuclease activity of DCLRE1B/Apollo. Preferentially binds to positive supercoiled DNA. Together with DCLRE1B/Apollo, required to control the amount of DNA topoisomerase (TOP1, TOP2A and TOP2B) needed for telomere replication during fork passage and prevent aberrant telomere topology. Recruits TERF2IP/RAP1 to telomeres, thereby participating in to repressing homology-directed repair (HDR), which can affect telomere length.

#### **Cellular Location**

Nucleus {ECO:0000255|PROSITE-ProRule:PRU00625, ECO:0000269|PubMed:20655466}. Chromosome, telomere. Note=Colocalizes with telomeric DNA in interphase cells and is located at chromosome ends during metaphase

#### **Tissue Location**

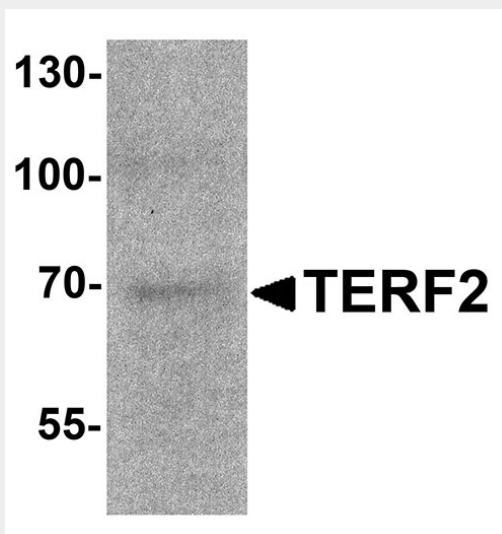
Ubiquitous. Highly expressed in spleen, thymus, prostate, uterus, testis, small intestine, colon and peripheral blood leukocytes

### **TERF2 Antibody - Protocols**

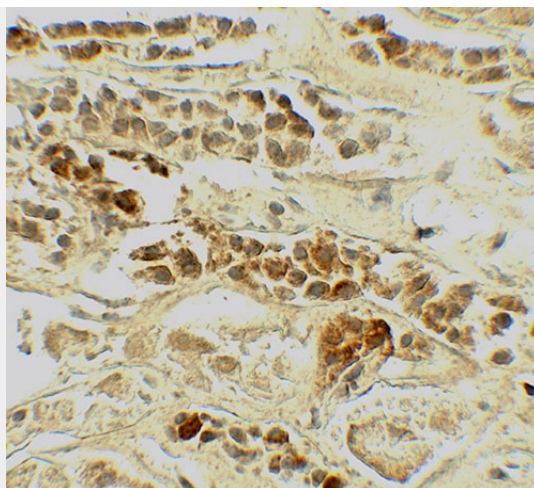
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **TERF2 Antibody - Images**



Western blot analysis of TERF2 in 293 cell lysate with TERF2 antibody at 1 µg/ml.



Immunohistochemistry of TERF2 in human kidney tissue with TERF2 antibody at 5 µg/mL.

### **TERF2 Antibody - Background**

The telomeric repeat binding factor family (TERF1 and TERF2) plays a key role in cellular immortalization and cellular senescence (1). TERF2, as a component of the telomere nucleoprotein complex, is present at telomeres in metaphase of the cell cycle (2). TERF2 is a second negative regulator of telomere length and binds as a dimer to TTAGGG repeats at ends of chromosomes (telomeres), where it blocks inappropriate activation of the ATM/p53 pathway (2,3). TERF1 negatively regulates telomere elongation, while TERF2 protects the chromosome ends by inhibiting end-to-end fusions. Down-regulation of TRF expression in tumor cells may contribute to cell immortalization and malignant progression (4,5).

### **TERF2 Antibody - References**

- Broccoli D, Smogorzewska A, Chong L, et al. Human telomeres contain two distinct Myb-related proteins, TRF1 and TRF2. *Nat. Genet.* 1997; 17:231-5.
- Bilaud T, Brun C, Ancelin K, et al. Telomeric localization of TRF2, a novel human telobox protein. *Nat. Genet.* 1997; 17:236-9.
- van Steensel B and Smogorzewska A. TRF2 protects human telomeres from end-to-end fusions. *Cell* 1998; 92:401-13.
- Matsutani N, Yokozaki H, Tahara E, et al. Expression of TRF1 and 2 and TRF1-interacting nuclear protein 2 in human gastric carcinomas. *Int. J. Oncol.* 2001; 19:507-12.