

TERF2 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO1906a

Product Information

Application	WB, IHC, E
Primary Accession	Q15554
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3H6B4
Isotype	IgG1
Calculated MW	59594
Description	This gene encodes a telomere specific protein, TERF2, which is a component of the telomere nucleoprotein complex. This protein is present at telomeres in metaphase of the cell cycle, is a second negative regulator of telomere length and plays a key role in the protective activity of telomeres. While having similar telomere binding activity and domain organization, TERF2 differs from TERF1 in that its N terminus is basic rather than acidic.
Immunogen	Purified recombinant fragment of human TERF2 (AA: 324-500) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	7014
Other Names	Telomeric repeat-binding factor 2, TTAGGG repeat-binding factor 2, Telomeric DNA-binding protein, TERF2, TRBF2, TRF2
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TERF2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TERF2
Synonyms	TRBF2, TRF2 {ECO:0000303 PubMed:28216226}

Function	<p>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 (PubMed:15608617, PubMed:16166375, PubMed:20655466, PubMed:28216226, PubMed:9326950, PubMed:9326951, PubMed:9476899). 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 (PubMed:16166375, PubMed:20655466). Component of the shelterin complex (telosome) that is involved in the regulation of telomere length and protection (PubMed:16166375). 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 (PubMed:16166375). 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 (PubMed:20655466). Required both to recruit DCLRE1B/Apollo to telomeres and activate the exonuclease activity of DCLRE1B/Apollo (PubMed:20655466, PubMed:28216226). Preferentially binds to positive supercoiled DNA (PubMed:15608617, PubMed:20655466). 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 (PubMed:20655466). Recruits TERF2IP/RAP1 to telomeres, thereby participating in to repressing homology-directed repair (HDR), which can affect telomere length (By similarity).</p>
Cellular Location	<p>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</p>
Tissue Location	<p>Ubiquitous. Highly expressed in spleen, thymus, prostate, uterus, testis, small intestine, colon and peripheral blood leukocytes.</p>

References

1. PLoS One. 2012;7(4):e34386. 2. Breast Cancer Res Treat. 2011 Jun;127(3):623-30.

Images

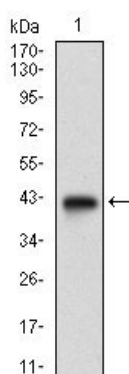


Figure 1: Western blot analysis using TERF2 mAb against human TERF2 (AA: 324-500) recombinant protein. (Expected MW is 39.7 kDa)

Figure 2: Western blot analysis using TERF2 mAb against HEK293 (1) and TERF2 (AA: 324-500)-hIgGFc transfected HEK293 (2) cell lysate.

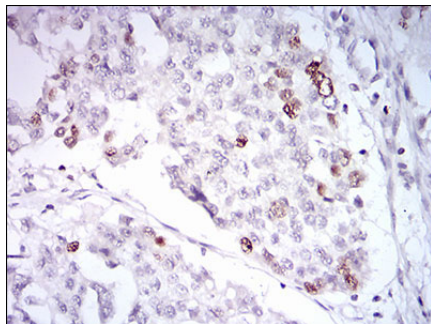
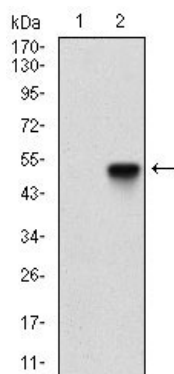


Figure 3: Immunohistochemical analysis of paraffin-embedded ovarian cancer tissues using TERF2 mouse mAb with DAB staining.

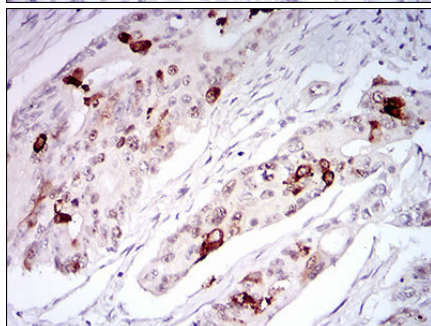


Figure 4: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using TERF2 mouse mAb with DAB staining.

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