

## Product datasheet

# Anti-Twinkle antibody ab83329

[3 Images](#)

### Overview

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<b>Product name</b>	Anti-Twinkle antibody
<b>Description</b>	Rabbit polyclonal to Twinkle
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, WB, ELISA
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat, Rabbit, Horse, Chicken, Guinea pig, Cow, Cat, Dog, Zebrafish 
<b>Immunogen</b>	Synthetic peptide corresponding to a region within internal sequence amino acids 540-589 (GVFRKFATDN NCHVTLVIHP RKEDDDKELQ TASIFGSAKA SQEADNVLIL) of human Twinkle (NP_068602). <a href="#">Run BLAST with ExPASy</a> <a href="#">Run BLAST with NCBI</a>
<b>Positive control</b>	Jurkat cell lysate

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
<b>Storage buffer</b>	Preservative: 0.09% Sodium azide Constituents: 2% Sucrose, PBS
<b>Purity</b>	Immunogen affinity purified
<b>Purification notes</b>	ab83329 is purified by peptide affinity chromatography method.
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

### Applications

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Our [Abpromise guarantee](#) covers the use of **ab83329** in the following tested applications.

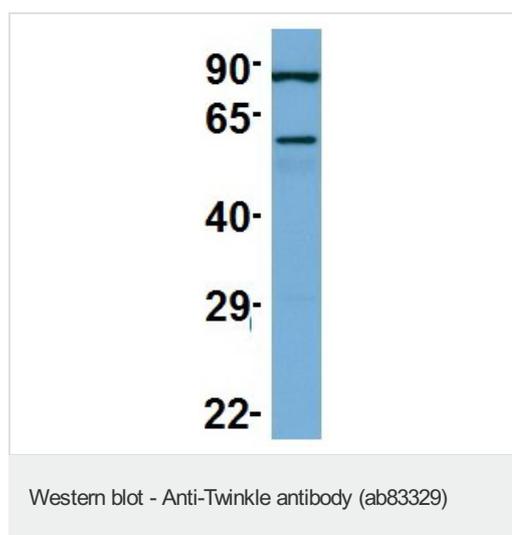
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 1 µg/ml.
WB		Use a concentration of 1 µg/ml. Predicted molecular weight: 77 kDa. Good results were obtained when blocked with 5% non-fat dry milk in 0.05% PBS-T.
ELISA		Use at an assay dependent concentration. Titer in peptide based assay is 1:312500.

## Target

<b>Function</b>	Involved in mitochondrial DNA (mtDNA) metabolism. Could function as an adenine nucleotide-dependent DNA helicase. Function inferred to be critical for lifetime maintenance of mtDNA integrity. In vitro, forms in combination with POLG, a processive replication machinery, which can use double-stranded DNA (dsDNA) as template to synthesize single-stranded DNA (ssDNA) molecules. May be a key regulator of mtDNA copy number in mammals.
<b>Tissue specificity</b>	High relative levels in skeletal muscle, testis and pancreas. Lower levels of expression in the heart, brain, placenta, lung, liver, kidney, spleen, thymus, prostate, ovary, small intestine, colon and leukocytes. Expression is coregulated with MRPL43.
<b>Involvement in disease</b>	Progressive external ophthalmoplegia with mitochondrial DNA deletions, autosomal dominant, 3 Sensory ataxic neuropathy dysarthria and ophthalmoparesis Mitochondrial DNA depletion syndrome 7
<b>Sequence similarities</b>	Contains 1 SF4 helicase domain.
<b>Cellular localization</b>	Mitochondrion matrix > mitochondrion nucleoid. Colocalizes with mtDNA in mitochondrial nucleoids, a nucleoproteins complex consisting of a number of copies of proteins associated with mtDNA, probably involved in mtDNA maintenance and expression.

## Images



Western blot analysis of HeLa cell lysate labeling Twinkle with ab83329 at 1.0µg/ml.



Western blot - Anti-Twinkle antibody (ab83329)

Anti-Twinkle antibody (ab83329) at 1 µg/ml (in 5% skim milk / PBS buffer) + Jurkat cell lysate at 10 µg

#### Secondary

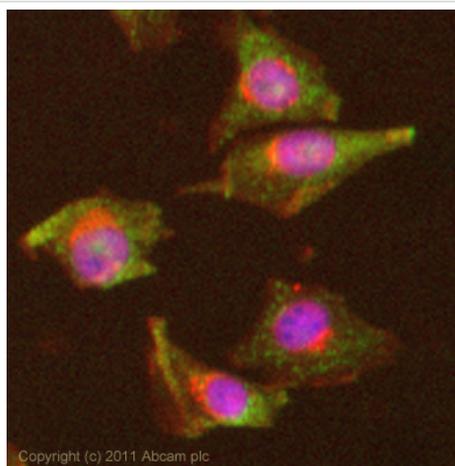
HRP conjugated anti-Rabbit IgG at 1/50000 dilution

**Predicted band size:** 77 kDa

**Observed band size:** 77 kDa

**Additional bands at:** 57 kDa. We are unsure as to the identity of these extra bands.

12% gel concentration



Immunocytochemistry/ Immunofluorescence - Anti-Twinkle antibody (ab83329)

ICC/IF image of ab83329 stained HeLa cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab83329, 1 µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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