abcam

Product datasheet

Anti-POLG antibody ab97661

1 Abreviews 5 图像

概述

产品名称	Anti-POLG抗体
描述	**兔多克隆抗体**to POLG
宿主	Rabbit
经测试应用	**适用于:** ICC/IF, IP, IHC-P, WB
种属反应性	**与反应:** Rat, Human
免疫原	Synthetic peptide corresponding to Human POLG aa 779-1201. Database link: **NP_002684**
阳性对照	WB: MCF7, MDA-MB-231 cell and rat testis tissue lysate; IHC-P: Human skeletal muscle tissue; IF: HeLa cells; IP: MCF7 cell lysate.
常规说明	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
存储溶液	pH: 7.00 Preservative: 0.025% Proclin 300 Constituents: 79% PBS, 20% Glycerol (glycerin, glycerine)
纯度	Immunogen affinity purified
克隆	**多克隆**
同种型	IgG

应用

The Abpromise guarantee Abpromise™承诺保证使用ab97661于以下的经测试应用

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
ICC/IF		1/100 - 1/1000.
IP		1/100 - 1/500.
IHC-P		1/100 - 1/1000.
WB	★☆☆☆☆ (1)	1/500 - 1/3000. Predicted molecular weight: 140 kDa.

靶标

功能 Involved in the replication of mitochondrial DNA.

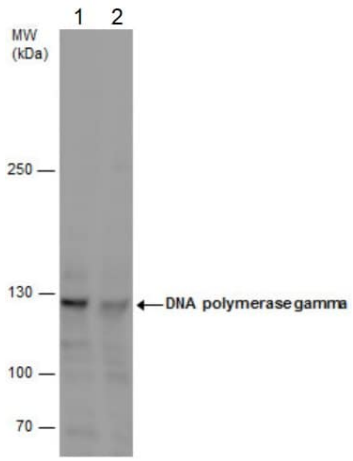
疾病相关 Defects in POLG are the cause of progressive external ophthalmoplegia with mitochondrial DNA deletions autosomal dominant type 1 (PEOA1) [MIM:157640]. Progressive external ophthalmoplegia is characterized by progressive weakness of ocular muscles and levator muscle of the upper eyelid. In a minority of cases, it is associated with skeletal myopathy, which predominantly involves axial or proximal muscles and which causes abnormal fatigability and even permanent muscle weakness. Ragged-red fibers and atrophy are found on muscle biopsy. A large proportion of chronic ophthalmoplegias are associated with other symptoms, leading to a multisystemic pattern of this disease. Additional symptoms are variable, and may include cataracts, hearing loss, sensory axonal neuropathy, ataxia, depression, hypogonadism, and parkinsonism.
Defects in POLG are a cause of progressive external ophthalmoplegia with mitochondrial DNA deletions autosomal recessive (PEOB) [MIM:258450]. PEOB is a severe form of progressive external ophthalmoplegia. It is clinically more heterogeneous than the autosomal dominant forms. Can be more severe.
Defects in POLG are a cause of sensory ataxic neuropathy dysarthria and ophthalmoparesis (SANDO) [MIM:607459]. SANDO is a clinically heterogeneous systemic disorder with variable features resulting from mitochondrial dysfunction. It shares phenotypic characteristics with autosomal recessive progressive external ophthalmoplegia and mitochondrial neurogastrointestinal encephalopathy syndrome. The clinical triad of symptoms consists of sensory ataxic, neuropathy, dysarthria, and ophthalmoparesis.
Defects in POLG are a cause of Alpers-Huttenlocher syndrome (AHS) [MIM:203700]; also called Alpers diffuse degeneration of cerebral gray matter with hepatic cirrhosis. AHS is an autosomal recessive hepatocerebral syndrome. The typical course of AHS includes severe developmental delay, intractable seizures, liver failure, and death in childhood. Refractory seizures, cortical blindness, progressive liver dysfunction, and acute liver failure after exposure to valproic acid are considered diagnostic features. The neuropathological hallmarks of AHS are neuronal loss, spongiform degeneration, and astrocytosis of the visual cortex. Liver biopsy results show steatosis, often progressing to cirrhosis.
Defects in POLG are a cause of mitochondrial neurogastrointestinal encephalopathy syndrome (MNGIE) [MIM:603041]; also known as myoneurogastrointestinal encephalomyopathy. MNGIE is an autosomal recessive disease associated with multiple deletions of skeletal muscle mitochondrial DNA (MtDNA). It is clinically characterized by onset between the second and fifth decades of life, ptosis, progressive external ophthalmoplegia, gastrointestinal dysmotility (often pseudoobstruction), diffuse leukoencephalopathy, thin body habitus, peripheral neuropathy, and

myopathy.
Defects in POLG are a cause of Leigh syndrome (LS) [MIM:256000]. LS is a severe neurological disorder characterized by bilaterally symmetrical necrotic lesions in subcortical brain regions.

序列相似性 Belongs to the DNA polymerase type-A family.

细胞定位 Mitochondrion.

图片



Western blot - Anti-POLG antibody (ab97661)

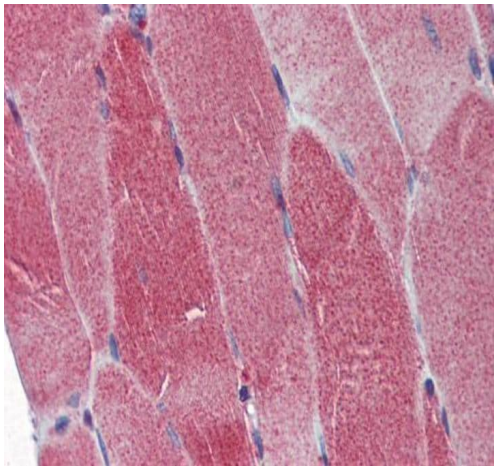
All lanes : Anti-POLG antibody (ab97661) at 1/1000 dilution

Lane 1 : MCF7 (human breast adenocarcinoma cell line) whole cell lysate
Lane 2 : MDA-MB-231 (human breast adenocarcinoma cell line) whole cell lysate

Lysates/proteins at 30 µg per lane.

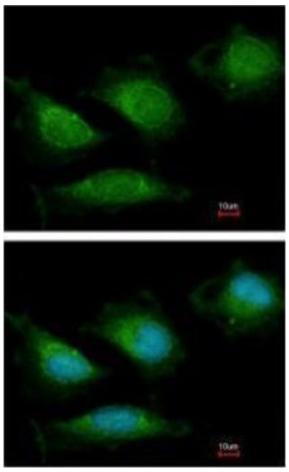
Predicted band size: 140 kDa

5% SDS-PAGE



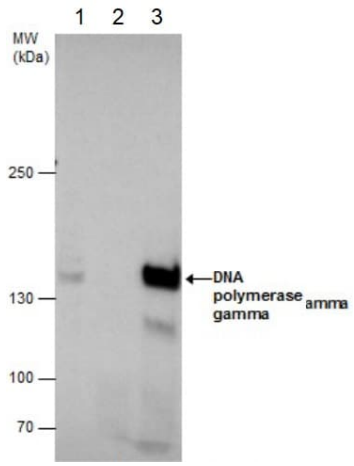
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-POLG antibody (ab97661)

Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue staining DNA polymerase gamma with ab97661 at 10 µg/ml.
Antigen Retrieval: EDTA based buffer, pH 8.0, 15min.



Immunocytochemistry/ Immunofluorescence - Anti-POLG antibody (ab97661)

Immunofluorescence analysis of methanol-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate labeling DNA polymerase gamma with ab97661 at 1/200 dilution. Costained with Hoechst 33342.



Immunoprecipitation - Anti-POLG antibody (ab97661)

Immunoprecipitation of DNA polymerase gamma protein from MCF7 (human breast adenocarcinoma cell line) whole cell lysate using 5 µg ab97661.

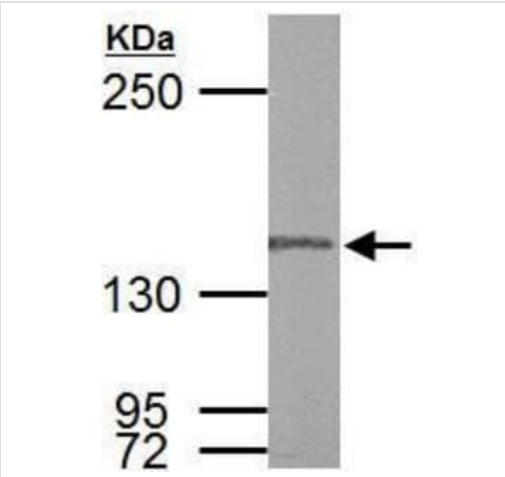
IP Sample:

1- MCF7 cells

2- Control IgG

3- ab97661

Western blot analysis was performed using ab97661. followed by anti-Rabbit IgG antibody.



Western blot - Anti-POLG antibody (ab97661)

Anti-POLG antibody (ab97661) at 1/1000 dilution + Rat testis tissue lysate at 50 µg

Secondary

HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 140 kDa

5% SDS-PAGE

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.cn/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors