# abcam

# Product datasheet

# Anti-MTHFR antibody [EPR19781] ab203786



重组 RabMAb

**5 References** 9图像

概述

产品名称 Anti-MTHFR抗体[EPR19781]

描述 兔单克隆抗体[EPR19781] to MTHFR

宿主 Rabbit

适用于: IHC-P, IP, ICC/IF, WB 经测试应用

种属反应性 与反应: Mouse, Human

免疫原 Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.

阳性对照 WB: Human fetal brain, fetal heart, fetal kidney, spleen and fetal liver lysates; Jurkat, HT-29, HEK-

> 293, RAW 264.7 and NIH/3T3 whole cell lysates; Mouse placenta and kidney lysates. ICC/IF: Jurkat and RAW 264.7 cells. IP: HT-29 whole cell lysate. IHC-P: Human thyroid carcinoma and

kidney tissues.

常规说明 This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility

- Improved sensitivity and specificity

- Long-term security of supply

- Animal-free production

For more information see here.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb**® **patents**.

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 long

term. Avoid freeze / thaw cycle.

存储溶液 pH: 7.2

Preservative: 0.01% Sodium azide

Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA

纯度 Protein A purified

克隆 单克隆 克隆编号 EPR19781

同种型 lgG

#### 应用

# The Abpromise guarantee

Abpromise™承诺保证使用ab203786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
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IP		1/30.  Note that mouse was not tested in IP but is predicted to react.
ICC/IF		1/100.
WB		1/1000. Detects a band of approximately 75 kDa (predicted molecular weight: 75 kDa).

#### 靶标

### 功能

Catalyzes the conversion of 5,10-methylenetetrahydrofolate to 5-methyltetrahydrofolate, a cosubstrate for homocysteine remethylation to methionine.

# 通路

One-carbon metabolism; tetrahydrofolate interconversion.

#### 疾病相关

Defects in MTHFR are the cause of methylenetetrahydrofolate reductase deficiency (MTHFRD) [MIM:236250]. MTHFRD is autosomal recessive disorder with a wide range of features including homocysteinuria, homocysteinemia [MIM:603174], developmental delay, severe mental retardation, perinatal death, psychiatric disturbances, and later-onset neurodegenerative disorders.

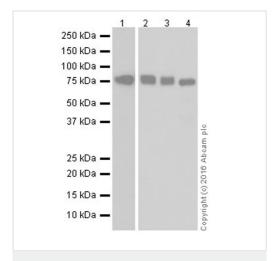
Defects in MTHFR may be a cause of susceptibility to ischemic stroke (ISCHSTR) [MIM:601367]; also known as cerebrovascular accident or cerebral infarction. A stroke is an acute neurologic event leading to death of neural tissue of the brain and resulting in loss of motor, sensory and/or cognitive function. Ischemic strokes, resulting from vascular occlusion, is considered to be a highly complex disease consisting of a group of heterogeneous disorders with multiple genetic and environmental risk factors.

Defects in MTHFR may be a cause of susceptibility to folate-sensitive neural tube defects (folate-sensitive NTD) [MIM:601634]. The most common NTDs are open spina bifida (myelomeningocele) and anencephaly.

#### 序列相似性

Belongs to the methylenetetrahydrofolate reductase family.

# 图片



Western blot - Anti-MTHFR antibody [EPR19781] (ab203786)

**All lanes :** Anti-MTHFR antibody [EPR19781] (ab203786) at 1/1000 dilution

Lane 1 : Human fetal brain lysate
Lane 2 : Human fetal heart lysate
Lane 3 : Human fetal kidney lysate

Lane 4: Human spleen lysate

Lysates/proteins at 10 µg per lane.

# **Secondary**

**All lanes :** Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

**Predicted band size:** 75 kDa **Observed band size:** 75 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1: 3 minutes; Lane 2,3 and 4: 30 seconds.

Secondary antibody only control.

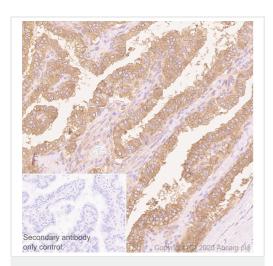
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Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-MTHFR antibody
[EPR19781] (ab203786)

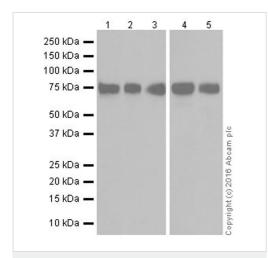
Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling MTHFR with ab203786 at 1/1000 (0.509  $\mu$ g/mL) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Cytoplasmic staining on human kidney. The section was incubated with ab203786 for 30 minutes at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20 minutes.



Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections) - Anti-MTHFR antibody
[EPR19781] (ab203786)



Western blot - Anti-MTHFR antibody [EPR19781] (ab203786)

Immunohistochemical analysis of paraffin-embedded Human thyroid carcinoma tissue labeling MTHFR with ab203786 at 1/1000 (0.509 µg/mL) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Cytoplasmic staining on human thyroid carcinoma. The section was incubated with ab203786 for 30 minutes at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20 minutes.

**Lanes 1-3**: Anti-MTHFR antibody [EPR19781] (ab203786) at 1/1000 dilution

Lanes 4-5: Anti-MTHFR antibody [EPR19781] (ab203786) at 1/5000 dilution

**Lane 1 :** Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate

Lane 2: HT-29 (Human colorectal adenocarcinoma cell line) whole cell lysate

Lane 3: Human fetal liver tissue lysate

Lane 4: HEK-293 (Human epithelial cell line from embryonic

kidney) whole cell lysate

Lane 5: Mouse placenta tissue lysate

Lysates/proteins at 20 µg per lane.

#### Secondary

**All lanes :** Goat Anti-Rabbit lgG H&L (HRP) (ab97051) at 1/100000 dilution

**Predicted band size:** 75 kDa **Observed band size:** 75 kDa

Exposure time: 3 minutes

3 250 kDa -250 kDa — 150 kDa — 150 kDa -100 kDa -100 kDa -75 kDa -75 kDa -50 kDa -50 kDa -Sopyright (c) 2016 Abcam plo 37 kDa -37 kDa -25 kDa -25 kDa -20 kDa -20 kDa -15 kDa -15 kDa -10 kDa -10 kDa -

Western blot - Anti-MTHFR antibody [EPR19781] (ab203786)

Blocking/Dilution buffer: 5% NFDM/TBST.

**All lanes :** Anti-MTHFR antibody [EPR19781] (ab203786) at 1/1000 dilution

**Lane 1 :** RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate

**Lane 2**: NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate

Lane 3: Mouse kidney tissue lysate

Lysates/proteins at 20 µg per lane.

# Secondary

**All lanes :** Goat Anti-Rabbit lgG H&L (HRP) (ab97051) at 1/100000 dilution

**Predicted band size:** 75 kDa **Observed band size:** 75 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFDM/TBST.

ab203786 MERGED

Immunocytochemistry/ Immunofluorescence - Anti-MTHFR antibody [EPR19781] (ab203786)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Jurkat (Human T cell leukemia cell line from peripheral blood) cells labeling MTHFR with ab203786 at 1/100 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).

Confocal image showing cytoplasmic staining on Jurkat cell line.

The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse lgG H&L (Alexa Fluor® 594) preadsorbed (ab150120) at 1/1000 dilution (red).

The negative controls are as follows:-

-ve control 1: ab203786 at 1/100 dilution followed by  $\underline{ab150120}$  at 1/1000 dilution.

-ve control 2:  $\underline{ab7291}$  at 1/1000 dilution followed by  $\underline{ab150077}$  at 1/1000 dilution.

ab203786 MERGED

DAPI -ve control 1 -ve control 2

Immunocytochemistry/ Immunofluorescence - Anti-MTHFR antibody [EPR19781] (ab203786)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) cells labeling MTHFR with ab203786 at 1/100 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor<sup>®</sup> 488) (**ab150077**) secondary antibody at 1/1000 dilution (green).

Confocal image showing cytoplasmic staining on RAW 264.7 cell line.

The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse lgG H&L (Alexa Fluor® 594) preadsorbed (ab150120) at 1/1000 dilution (red).

The negative controls are as follows:-

-ve control 1: ab203786 at 1/100 dilution followed by  $\underline{ab150120}$  at 1/1000 dilution.

-ve control 2:  $\underline{ab7291}$  at 1/1000 dilution followed by  $\underline{ab150077}$  at 1/1000 dilution.

1 2 3

250 kDa —
150 kDa —
100 kDa —
75 kDa —
50 kDa —
50 kDa —
25 kDa —
25 kDa —
25 kDa —
20 kDa —
115 kDa —
20 kDa —
21 kDa —
22 kDa —
23 kDa —
24 kDa —
25 kDa —
26 kDa —
27 kDa —
28 kDa —
28 kDa —
29 kDa —
20 kDa —
2

Immunoprecipitation - Anti-MTHFR antibody [EPR19781] (ab203786)

MTHFR was immunoprecipitated from 0.35mg of HT-29 (Human colorectal adenocarcinoma cell line) whole cell lysate with ab203786 at 1/30 dilution.

Western blot was performed from the immunoprecipitate using ab203786 at 1/500 dilution.

VeriBlot for IP Detection Reagent (HRP) (<u>ab131366</u>), was used for detection at 1/1000 dilution.

Lane 1: HT-29 whole cell lysate, 10µg (Input).

Lane 2: ab203786 IP in HT-29 whole cell lysate.

Lane 3: Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) instead of ab203786 in HT-29 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds.



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