abcam

ab171937

# Anti-MOS antibody [EPR6720(2)-23]

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR6720(2)-23 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1.653 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

### IP

**Not recommended**

| | |
|---|---|
| **Species** | Human, Rat, Mouse |
| **Dilution info** | - |
| **Notes** | - |

### IHC

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat, Human |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 - 1/5000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/1000 - 1/5000 |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Not recommended

| | |
|---|---|
| **Species** | Human, Rat, Mouse |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |

| | |
|---|---|
| **Dilution info** | 1/100 - 1/500 |
| **Notes** | ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

### Expected

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information Proto-oncogene serine/threonine-protein kinase mos

| | |
|---|---|
| **Function** | Serine/threonine kinase involved in the regulation of MAPK signaling. Is an activator of the ERK1/2 signaling cascade playing an essential role in the stimulation of oocyte maturation. |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Conditional Ambient |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Notes

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

**What are the advantages of a recombinant monoclonal antibody?**
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 batch production

For more information, read more on recombinant antibodies.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | The MOS protein also known simply as MOS is a serine/threonine-protein kinase with a mass of approximately 39 kDa. It is particularly expressed in oocytes and is an essential component during oocyte maturation. MOS acts mechanically by regulating the transition from meiotic prophase to metaphase and ensures the metaphase arrest which is important for successful fertilization. It is well-conserved across species including in the commonly studied 'mos mouse' model which facilitates detailed exploration of its functions. |
| **Biological function summary** | The MOS protein plays a significant role in the regulation of the meiotic cell cycle. It is part of the Mos-MAPK pathway where it activates MAP kinase (MAPK) to propagate signals that stabilize cell division processes in oocytes. MOS ensures the correct timing of progression through meiosis impacting the fidelity and viability of the mature eggs. It forms a complex with other proteins such as MAPK and MEK for effective signal transduction during oocyte maturation. |
| **Pathways** | MOS integrates into the mitogen-activated protein kinase (MAPK) signaling pathway which is pivotal for cell cycle regulation in oocytes. The protein is closely related to MEK1 and MAPK which together construct the MAPK cascade leading to activation of key meiotic processes. This cascade also influences the stabilization of cyclin B-CDK1 another intricate player in cell cycle control linking MOS to broader regulatory networks in cell cycle checkpoint regulation. |
| **Associated diseases and disorders** | MOS shows potential involvement in conditions related to infertility and reproductive dysfunction. Aberrant expression or mutation of MOS can disrupt normal meiotic processes leading to failed oocyte maturation and infertility. The protein is also connected to disorders involving inappropriate MAPK pathway activation which can lead to oncogenesis. In particular abnormal interaction with proteins like MEK1 and MAPK may contribute to the pathophysiology of certain cancers where dysregulation of cell division pathways is a hallmark. |

# Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

We do not recommend this combination. It is not covered by our product promise.

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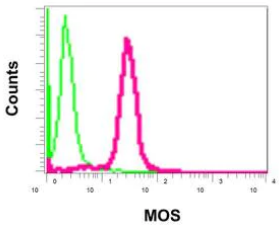
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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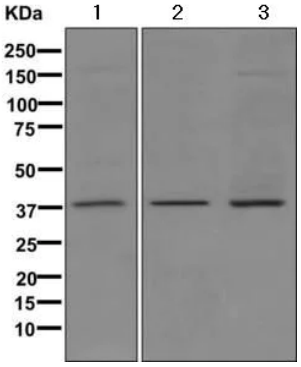
## 2 product images




### Flow Cytometry (Intracellular) - Anti-MOS antibody [EPR6720(2)-23] (ab171937)

MOS Flow Cytometry (Intracellular) staining using rabbit Anti-MOS antibody

Intracellular flow cytometric analysis of permeabilized Jurkat cells labeling MOS with ab171937 at 1/100 (red) or a rabbit IgG (negative) (green).




### Western blot - Anti-MOS antibody [EPR6720(2)-23] (ab171937)

All lanes:
Western blot - Anti-MOS antibody [EPR6720(2)-23] (ab171937) at 1/1000 dilution

Lane 1:
Jurkat cell line lysate at 10 µg

Lane 2:
293T cell line lysate at 10 µg

Lane 3:
Mouse testis tissue lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP conjugated antibody at 1/500 dilution

Developed using the ECL technique.

Predicted band size: 38 kDa

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