Product datasheet

Anti-DDX4 / MVH antibody ab13840

Overview

Product name: Anti-DDX4 / MVH antibody
Description: Rabbit polyclonal to DDX4 / MVH
Host species: Rabbit
Tested applications: Suitable for: WB, Flow Cyt, IHC-P, IHC-Fr, ICC/IF, IHC-FoFr
Species reactivity: Reacts with: Mouse, Rat, Sheep, Cow, Human, Pig, Platypus
Immunogen: Synthetic peptide conjugated to KLH derived from within residues 700 to the C-terminus of Human DDX4/MVH. Read Abcam’s proprietary immunogen policy (Peptide available as ab13841.)
Positive control: This antibody gave a positive signal in Mouse EG (TMAS Embryonic Germ Cells) Whole Cell Lysate and Human Testis Tissue Lysate

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer: pH: 7.40
Preservative: 0.02% Sodium azide
Constituent: PBS
Note: Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab13840 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
**Function**
Probable ATP-dependent RNA helicase required during spermatogenesis (PubMed:10920202, PubMed:21034600). Required to repress transposable elements and preventing their mobilization, which is essential for the germline integrity. Acts via the piRNA metabolic process, which mediates the repression of transposable elements during meiosis by forming complexes composed of piRNAs and Piwi proteins and governs the methylation and subsequent repression of transposons. Involved in the secondary piRNAs metabolic process, the production of piRNAs in fetal male germ cells through a ping-pong amplification cycle.

**Tissue specificity**
Expressed only in ovary and testis. Expressed in migratory primordial germ cells in the region of the gonadal ridge in both sexes.

**Sequence similarities**
Belongs to the DEAD box helicase family. DDX4/VASA subfamily.
Contains 1 helicase ATP-binding domain.
Contains 1 helicase C-terminal domain.

**Cellular localization**
Cytoplasm. Cytoplasm, perinuclear region. Component of the meiotic nuage, also named P granule, a germ-cell-specific organelle required to repress transposon activity during meiosis.

### Application

<table>
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<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>WB</td>
<td>⭐️⭐️⭐️⭐️⭐️</td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 76 kDa (predicted molecular weight: 76 kDa). Can be blocked with DDX4 / MVH peptide (ab13841).</td>
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<tr>
<td>Flow Cyt</td>
<td></td>
<td>Use at an assay dependent concentration. PubMed: 23598447 ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>IHC-P</td>
<td>⭐️⭐️⭐️⭐️⭐️</td>
<td>1/200. PubMed: 19440488</td>
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<tr>
<td>IHC-Fr</td>
<td>⭐️⭐️⭐️⭐️⭐️</td>
<td>Use a concentration of 1 µg/ml.</td>
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<tr>
<td>ICC/IF</td>
<td>⭐️⭐️⭐️⭐️⭐️</td>
<td>1/100.</td>
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<tr>
<td>IHC-FoFr</td>
<td></td>
<td>1/400.</td>
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</table>

**Target**

**Images**
Ab13840 at 1/400 staining mouse fetal testis tissue sections by IHC-P. The tissue was blocked with both BSA and serum and fixed prior to incubation with the antibody for 3 hours at room temperature. A biotinylated secondary antibody was used (Vectastain Elite).

Please note Bouin's fluid was used as the fixative in this experiment.

Mouse embryonic gonad cells were fixed with 4% PFA, permeabilised and blocked with PBS, 1% BSA, 0.1% TX-100 and incubated with the DDX4 antibody, ab13840 (1 µg/ml) overnight at 4 degrees. ab13840 staining is shown in red and Oct4 staining is shown in green.

The image shows that the anti-DDX4 antibody, ab13840, stains the cytoplasm of mouse primordial germ cells when used in IHC-Fr.
Immunocytochemistry/ Immunofluorescence - Anti-DDX4 / MVH antibody (ab13840)

This image is courtesy of an Abreview submitted by Mai Sarraj.

**ab13840 at 1/1000 staining germ cells of the embryonic mouse testis by ICC/IF.** Cells were PFA fixed and permeabilized in 1% Triton X in PBS prior to blocking in 5% serum for 2 hours at 20°C. An Alexa Fluor® 488 conjugated goat anti-rabbit antibody was used as the secondary.

Western blot - Anti-DDX4 / MVH antibody (ab13840)

**All lanes**: Anti-DDX4 / MVH antibody (ab13840) at 1 µg/ml

**Lane 1**: Mouse EG (TMAS Embryonic Germ Cells) Whole Cell Lysate
**Lane 2**: Human testis tissue lysate - total protein (ab30257)

Lysates/proteins at 20 µg per lane.

**Secondary**

**All lanes**: Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Performed under reducing conditions.

**Predicted band size**: 76 kDa
**Observed band size**: 76 kDa
**Additional bands at**: 28 kDa, 47 kDa. We are unsure as to the identity of these extra bands.
All lanes: ab13840 at 1 µg/ml

Lane 1: Mouse EG (TMAS Embryonic Germ Cells) Whole Cell Lysate
Lane 2: Human testis tissue lysate - total protein

Lysates/proteins at 20 µg per lane.

Secondary
All lanes: Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 76 kDa
Observed band size: 79 kDa

why is the actual band size different from the predicted?

Additional bands at: 47 kDa, 52 kDa. We are unsure as to the identity of these extra bands.

All lanes: Anti-DDX4 / MVH antibody (ab13840) at 1 µg/ml

Lane 1: Mouse Ovary Lysate at 10 µg
Lane 2: Mouse Embryonic Germ Cell Lysate at 20 µg
Lane 3: Mouse Ovary Lysate at 10 µg with DDX4 / MVH peptide (ab13841) at 1 µg/ml
Lane 4: Mouse Embryonic Germ Cell Lysate at 20 µg with DDX4 / MVH peptide (ab13841) at 1 µg/ml

Predicted band size: 76 kDa
Observed band size: 76 kDa
ab13840 staining Postnatal Porcine Testis tissue sections by IHC-P. Bouin's Fixative was used to fix the sections prior to a heat mediated antigen retrieval step in sodium citrate buffer (pH 6). The sample was blocked in 10% serum for 1 hour at 22°C prior to incubation with the primary antibody, diluted 1/500, for 12 hours at 4°C. A biotinylated goat anti-rabbit antibody was used as the secondary.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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