Overview

Product name: Anti-Nodal antibody
Description: Mouse monoclonal to Nodal
Host species: Mouse
Tested applications: Suitable for: WB, IHC-P, ICC/IF, Flow Cyt
Species reactivity: Reacts with: Human
Immunogen: Recombinant fragment: RCEGECNPV GEEFHTPNHA YIQSLKRYQ PHRVPSTCCA PVKTKPLSML YVDNGRVLLD HKDMVEEG GC, corresponding to amino acids 275-347 of Human Nodal

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer: Preservative: None
PBS, pH 7.2
Purity: Protein G purified
Clonality: Monoclonal
Isotype: IgG1
Light chain type: kappa

Applications

Our Abpromise guarantee covers the use of ab55676 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>WB</td>
<td>★★★★☆☆☆☆</td>
<td>Use a concentration of 1 - 5 µg/ml. Predicted molecular weight: 40 kDa.</td>
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<tr>
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<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use a concentration of 3 µg/ml.</td>
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<td>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
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<td>Flow Cyt</td>
<td></td>
<td>Use 1µg for 10⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.</td>
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**Target**

**Function**
Essential for mesoderm formation and axial patterning during embryonic development.

**Involvement in disease**
Defects in NODAL are the cause of visceral heterotaxy autosomal type 5 (HTX5) [MIM:270100]. A form of visceral heterotaxy, a complex disorder due to disruption of the normal left-right asymmetry of the thoracoabdominal organs. It results in an abnormal arrangement of visceral organs, and a wide variety of congenital defects. Clinical features of visceral heterotaxy autosomal type 5 include situs inversus viscerum or situs ambiguus, congenital heart defect, transposition of the great vessels ventricular septal defect, atrial septal defect, truncus communis, and dextrocardia.

**Sequence similarities**
Belongs to the TGF-beta family.

**Cellular localization**
Secreted.

**Images**

Nodal antibody (ab55676) used in immunohistochemistry at 3µg/ml on formalin fixed and paraffin embedded human endometrium cancer.
Nodal antibody (ab55676) at 1µg/lane + HeLa cell lysate at 25µg/lane.

ICC/IF image of ab55676 stained mouse embryonic stem 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 (ab55676, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse 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.

Overlay histogram showing HEK293 cells stained with ab55676 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab55676, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HEK293 cells fixed with 100% methanol (5 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.

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