### 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: RCEGECPNV GEEFHTNHA YIQSSLLKRYQ PHRVPSTCCA PVKTKPLSML YVDNGRVLLD HHKDMVEEC GC, corresponding to amino acids 275-347 of Human Nodal

**General notes**  
Abcam is committed to meeting high standards of ethical manufacturing and has decided to discontinue this product by June 2019 as it has been generated by the ascites method. We are sorry for any inconvenience this may cause.

### Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.</td>
</tr>
<tr>
<td><strong>Storage buffer</strong></td>
<td>Preservative: None</td>
</tr>
<tr>
<td><strong>Purity</strong></td>
<td>Protein G purified</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Monoclonal</td>
</tr>
<tr>
<td><strong>Isotype</strong></td>
<td>IgG1</td>
</tr>
<tr>
<td><strong>Light chain type</strong></td>
<td>kappa</td>
</tr>
</tbody>
</table>

### 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>
</tr>
</thead>
<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>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use a concentration of 3 µg/ml.</td>
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<tr>
<td>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td></td>
<td>Use 1µg for 10^6 cells.  &lt;br&gt; <strong>ab170190</strong> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.</td>
</tr>
</tbody>
</table>

**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 ambiguous, congenital heart defect, transposition of the great vessels ventricular septal defect, atrial septal defect, truncuscommunis, 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.
Western blot - Anti-Nodal antibody (ab55676)

Nodal antibody (ab55676) at 1µg/lane + HeLa cell lysate at 25µg/lane.

Immunocytochemistry/ Immunofluorescence - Anti-Nodal antibody (ab55676)

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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