Product name: Anti-Nodal antibody [5C3] ab55676

Description: Mouse monoclonal [5C3] to Nodal

Host species: Mouse

Tested applications: Suitable for: WB, IHC-P, ICC/IF, Flow Cyt

Species reactivity: Reacts with: Mouse, Human

Immunogen: Recombinant fragment: RCEGECNPV GEEFHPTNHA YIQSLKRYQ PHRVPSTCCA PVKTKPLSML YVDNGRVLLD HHKDMIVEEC GC, corresponding to amino acids 275-347 of Human Nodal

General notes: This product was changed from ascites to tissue culture supernatant on 28th May 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

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: pH: 7.4

Purity: Tissue culture supernatant

Clonality: Monoclonal

Clone number: 5C3

Isotype: IgG1
Light chain type: kappa

Applications

The Abpromise guarantee: 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>🌟🌟🌟🌟🌟 (3)</td>
<td>Use at an assay dependent concentration. Predicted molecular weight: 40 kDa.</td>
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<tr>
<td>IHC-P</td>
<td>🌟🌟🌟🌟🌟 (1)</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>ICC/IF</td>
<td>🌟🌟🌟🌟🌟 (1)</td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td></td>
<td>Use at an assay dependent concentration. ab170190 - 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 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 3ug/ml on formalin fixed and paraffin embedded human endometrium cancer.

This image was generated using the ascites version of the product.

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

This image was generated using the ascites version of the product.

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.

This image was generated using the ascites version of the product.
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.

This image was generated using the ascites version of the product.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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