

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse MESDC2 in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with human MESDC2 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse MESDC2 Ala30-Leu224 Accession # Q9ERE7
<b>Conjugate</b>	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
<b>Formulation</b>	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

<b>Western Blot</b>	Optimal dilution of this antibody should be experimentally determined.
<b>Immunohistochemistry</b>	Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

## BACKGROUND

Mesoderm development candidate gene 2 (MESDC2, Mesd), also known as Boca in drosophila, is a 22 kDa protein that is required for formation of the primitive streak and mesoderm during embryogenesis (1-3). Mature mouse MESDC2 consists of an 83 amino acid (aa) structured central domain with flexible N- and C-terminal regions (4, 5). It shares 89% and 96% aa sequence identity with human and rat MESDC2, respectively. Although Boca lacks 34 aa in the C-terminal region and is only 40% identical with mouse MESDC2, the mouse protein can functionally substitute for Boca in drosophila S2 cells (6). A C-terminal ER retention motif localizes MESDC2 and Boca to the lumen of the endoplasmic reticulum (2, 6, 7). Within the ER, MESDC2 binds to the Wnt co-receptors LRP5 and LRP6 and is required for their proper folding and cell surface expression (2, 5, 8, 9). MESDC2 is therefore important for cellular Wnt responsiveness (9). When added extracellularly, MESDC2 binds to cell surface LRP6, preventing its interaction with the Wnt antagonist Dkk-1. This binding does not, however, trigger LRP6 internalization or alteration of cytoplasmic  $\beta$ -catenin levels (8). An LRP5 mutant associated with high bone mass does not interact with MESDC2 (10). MESDC2 itself can be disrupted by a chromosomal translocation occurring in the germ cell tumor, infantile sacrococcygeal teratoma (11).

## PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.