

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Fibulin 5/DANCE in direct ELISAs and Western blots.                                                                                                                                                                                                           |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 293904                                                                                                                                                                                                                            |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human Fibulin 5/DANCE<br>Gln24-Phe448<br>Accession # Q9UBX5                                                                                                                                                                 |
| <b>Conjugate</b>          | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm                                                                                                                                                                                         |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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

Fibulin 5, also known as DANCE and EVEC, is a secreted 55 kDa matricellular glycoprotein that plays an important role in elastic fiber network assembly and angiogenesis (1). Mature human Fibulin 5 contains an N-terminal EGF-like domain with an RGD motif, a 44 amino acid (aa) spacer region, five more tandem EGF-like domains, and a 115 aa Fibulin-like C-terminal region (2, 3). Mature human Fibulin 5 shares 95% aa sequence identity with mouse and rat Fibulin 5. Fibulin 5 is expressed by smooth muscle cells and endothelial cells of the developing vasculature as well as by migrating neural crest cells and lung interstitial fibroblasts (2-4). It is down-regulated in the adult vasculature but is re-expressed at aortic branching points, in the uterus, and at sites of mechanical or atherosclerotic injury (2, 3, 5). The RGD motif of Fibulin 5 binds to several cell surface Integrins including αVβ3, αVβ5, α9β1, α4β1, and α5β1 (2, 6, 7). The calcium-dependent binding of Fibulin 5 to elastic fibers serves to anchor cells to the extracellular matrix (8). Fibulin 5 promotes elastic fiber assembly and maturation by organizing Tropoelastin, LTBP-2, and the crosslinking lysyl oxidase-like enzymes LOXL1, 2, and 4 along Fibrillin microfibrils (6, 9-11). In aged mice with decreased tissue elasticity, proteolytic removal of the N-terminal EGF-like domain prevents Fibulin 5 from interacting with Fibrillin-1 microfibrils (10). Fibulin 5 functions as an angiogenesis inhibitor by inhibiting vascular smooth muscle proliferation and migration and by limiting vascular sprouting (5, 12). Fibulin 5 is down-regulated in many malignancies (15). When experimentally re-expressed, however, Fibulin 5 enhances tumor cell invasiveness and cooperates with TGF-β in initiating and promoting epithelial-mesenchymal transition (EMT) (13, 15). Defects in Fibulin 5 expression or function can result in a loss of connective tissue integrity, cardiac elasticity, and ability to remodel the vasculature after injury (8, 5, 14).

## PRODUCT SPECIFIC NOTICES

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