

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Periostin/OSF-2 in direct ELISAs.                                                                                                                                                                                                                             |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2A</sub> Clone # 613643R                                                                                                                                                                                                                          |
| <b>Purification</b>       | Protein A or G purified from cell culture supernatant                                                                                                                                                                                                                       |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human Periostin/OSF-2<br>Met1-Gln836<br>Accession # Q15063                                                                                                                                                                  |
| <b>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 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.

**ELISA** 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

Periostin, also known as OSF-2, is a secreted matricellular protein with functions in extracellular matrix formation, cell migration, and inflammation (1). It is secreted as a 90 kDa monomer that can aggregate into >170 kDa higher-order multimers (2). Periostin contains an N-terminal EMI domain followed by four tandem FAS1 domains [takeshita]. Mature human Periostin shares 91% aa sequence identity with mouse and rat Periostin. Alternative splicing generates additional isoforms with various deletions in the C-terminal region following the FAS domains. Periostin is expressed by mesenchymal cells such as vascular smooth muscle cells, fibroblasts, osteoblasts, and odontoblasts in developing teeth (4-7). It is up-regulated in many carcinomas (2, 8). Periostin binds to Integrins  $\alpha_v\beta_3$  and  $\alpha_v\beta_5$  (2, 9), leading to enhanced cell adhesion and cell migration (2, 5, 6). It enhances Fibronectin and Collagen I production and promotes collagen fibrillogenesis (10, 11). It also induces epithelial-mesenchymal transition, tumor growth, invasion, and metastasis (9). Periostin induces the expression of VEGF R2 on endothelial cells and VEGF-C in tumor cells, and it can induce tumor lymphangiogenesis (8, 12). Periostin plays an important role in heart valve development and tissue healing after myocardial infarction (5, 13, 14). In asthma, it is up-regulated in bronchial epithelium and plays both destructive and protective roles by inducing eosinophil infiltration and inhibiting goblet cell metaplasia and mucus production, respectively (15, 16).

#### PRODUCT SPECIFIC NOTICES

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