# Recombinant Mouse Periostin/OSF-2

Catalog Number: 2955-F2

## DESCRIPTION

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| **Source** | *Spodoptera frugiperda*, *Sf* 21 (baculovirus)-derived mouse Periostin/OSF-2 protein<br>Asn24-Gln811, with a C-terminal 6-His tag<br>Accession # NP_056599 |
| **N-terminal Sequence Analysis** | Asn24 |
| **Predicted Molecular Mass** | 88.5 kDa |

## SPECIFICATIONS

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| **SDS-PAGE** | 90 kDa, reducing conditions |
| **Activity** | Measured by its ability to induce adhesion of ATDC5 mouse chondrogenic cells.<br>Immobilized Recombinant Mouse Periostin/OSF-2 at 10 µg/mL (100 µL/well) induces >50% cell adhesion. |
| **Endotoxin Level** | <0.10 EU per 1 µg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in Tris-Citrate and NaCl. See Certificate of Analysis for details. |

## PREPARATION AND STORAGE

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| **Reconstitution** | Reconstitute at 100 µg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>• 12 months from date of receipt, -20 to -70 °C as supplied.<br>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>• 3 months, -20 to -70 °C under sterile conditions after reconstitution. |

## 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 (3). Mature mouse Periostin shares 91% and 98% aa sequence identity with mouse and rat Periostin, respectively. 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 upregulated 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).

**References:**


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