### Species Reactivity

**Mouse**

### Specificity

Detects mouse Periostin/OSF-2 in direct ELISAs and Western blots. In direct ELISAs, less than 30% cross-reactivity with recombinant rat Periostin/OSF-2 and recombinant human Periostin/OSF-2 is observed.

### Source

Polyclonal Goat IgG

### Purification

Antigen Affinity-purified

### Immunogen

*S. frugiperda* insect ovarian cell line Sf21-derived recombinant mouse Periostin/OSF-2

Accession # Q62009

### Endotoxin Level

<0.10 EU per 1 μg of the antibody by the LAL method.

### Formulation

Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

### 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.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Western Blot</strong></td>
<td>0.1 μg/mL</td>
</tr>
<tr>
<td><strong>Immunocytochemistry</strong></td>
<td>5-15 μg/mL</td>
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<tr>
<td><strong>Neutralization</strong></td>
<td>Measured by its ability to neutralize Periostin/OSF-2-mediated adhesion of the ATDC5 mouse chondrogenic cell line. The Neutralization Dose (ND&lt;sub&gt;50&lt;/sub&gt;) is typically 1-5 μg/mL in the presence of 5 μg/mL Recombinant Mouse Periostin/OSF-2.</td>
</tr>
</tbody>
</table>

### DATA

**Neutralization**

Cell Adhesion Mediated by Periostin/OSF-2 and Neutralization by Mouse Periostin/OSF-2 Antibody. Recombinant Mouse Periostin/OSF-2 (Catalog # 2955-F2), immobilized onto a microplate, supports the adhesion of the ATDC5 mouse chondrogenic cell line in a dose-dependent manner (orange line). Adhesion elicited by Recombinant Mouse Periostin/OSF-2 (5 μg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Mouse Periostin/OSF-2 Isoform 2 Antibody (Catalog # AF2955). The ND<sub>50</sub> is typically 1-5 μg/mL.

**Immunocytochemistry**

Periostin/OSF-2 in Rat Mesenchymal Stem Cells. Periostin/OSF-2 was detected in immersion fixed rat mesenchymal stem cells differentiated to osteoblasts using Goat Anti-Mouse Periostin/OSF-2 Isoform 2 Antibody (Catalog # AF2955) at 10 μg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

### PREPARATION AND STORAGE

**Reconstitution**

Reconstitute at 0.2 mg/mL in sterile PBS.

**Shipping**

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

*Small pack size (SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

**Stability & Storage**

- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
  - 12 months from date of receipt, -20 to -70 °C as supplied.
  - 1 month, 2 to 8 °C under sterile conditions after reconstitution.
  - 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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Mouse Periostin, also known as OSF-2 (osteoblast-specific factor 2) is a 170 kDa, secreted, homodimeric protein that belongs to the periostin family of the FAS1 superfamily of molecules (1-4). It is a TGF-β inducible molecule that serves as both an adhesion molecule and tumor suppressor (2, 5, 6, 7). It is synthesized as a 838 amino acid (aa) precursor that contains a 23 aa signal sequence and an 815 aa mature region (2, 8). It is unknown if the molecule has any significant glycosylation (2). Based on human OSF-2, the homodimer is not disulfide-linked (3). The molecule consists of two distinct regions. The N-terminus contains an 55 aa EMI domain, while the C-terminus contains four, 130 aa fasciculin type 1 (or FAS1) domains. The EMI domain is cysteine-rich and shows a highly basic α-helix (9).

Each FAS1 repeat exhibits a novel 7-stranded β-wedge with a multiple α-helix fold (1, 8). Multiple alternate splice forms are known to exist C-terminal (aa 672-812) to the four-fold FAS1 repeats. These mature molecules are 760, 761, 787 and 788 aa in length and show block deletions of 54 aa, 27 aa and/or 28 aa (10). The significance of the alternate splice forms is not clear. They do, however, appear to be temporally regulated (6). OSF-2 is known to bind to αvβ3 and αvβ5 integrins (3).

It is synthesized by smooth muscle cells, fibroblasts and osteoblasts (2, 5, 7). Mature mouse OSF-2 shares 98%, 92% and 91% aa identity with rat, canine and human OSF-2, respectively.

References:
10. Swiss-Prot Accession # Q62009.