

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects mouse Periostin/OSF-2 in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 345613
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse Periostin isoform 2 Asn24-Gln811 Accession # NP_056599
<b>Formulation</b>	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.

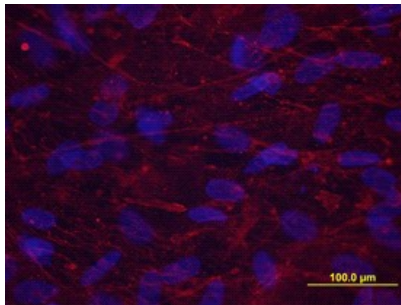
## APPLICATIONS

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.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	Recombinant Mouse Periostin/OSF-2 (Catalog # 2955-F2)
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below

## DATA

### Immunocytochemistry



**Periostin/OSF-2 in Human Osteocytes.** Periostin/OSF-2 was detected in immersion fixed human osteocytes using Rat Anti-Human/Mouse Periostin/OSF-2 Monoclonal Antibody (Catalog # MAB3548) at 10 µg/mL for 3 hours at room temperature. Cells were stained red and counterstained with DAPI (blue).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

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- $\beta$  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  $\alpha$ -helix (9). Each FAS1 repeat exhibits a novel 7-stranded  $\beta$ -wedge with a multiple  $\alpha$ -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  $\alpha$ ,  $\beta$ <sub>3</sub> and  $\alpha$ ,  $\beta$ <sub>5</sub> integrins (3). It is synthesized by smooth muscle cells, fibroblasts, and osteoblasts (2, 5, 7). Mature mouse OSF-2 is 98%, 92%, and 91% aa identical to rat, canine, and human OSF-2, respectively.

**References:**

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