

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects mouse Periostin/OSF-2 in direct ELISAs and Western blots.
Source	Monoclonal Rat IgG _{2A} Clone # 345613
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse Periostin isoform 2 Asn24-Gln811 Accession # NP_056599
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 as a 0.2 µm filtered solution in PBS.

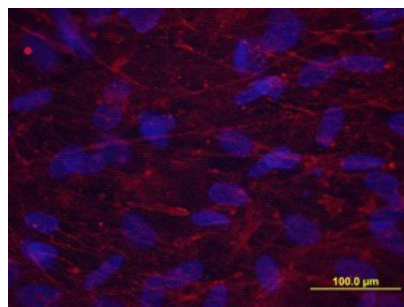
APPLICATIONS

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
Western Blot	1 µg/mL	Recombinant Mouse Periostin/OSF-2 (Catalog # 2955-F2)
Immunocytochemistry	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

Reconstitution	Reconstitute at 0.5 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. <ul style="list-style-type: none"> • 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.

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- 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 $\alpha_v\beta_3$ and $\alpha_v\beta_5$ 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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