

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Periostin/OSF-2 in direct ELISAs and Western blots. In direct ELISAs, less than 40% cross-reactivity with recombinant mouse Periostin and recombinant rat Periostin is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Periostin Asn22-Gln836 Accession # Q15063
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Human OSF-2 (Osteoblast-Specific Factor 2), also known as Periostin, is a 170 kDa secreted homodimeric protein that belongs to the periostin family of the FAS1 superfamily of molecules. It is a TGF- β inducible molecule that serves as both an adhesion molecule and tumor suppressor. It is synthesized as an 836 amino acid (aa) precursor that contains a 21 aa signal sequence and an 815 aa mature region. It is unknown if the molecule has any significant glycosylation. The human homodimer is not disulfide-linked. 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 (FAS1) domains. The EMI domain is cysteine-rich and shows a highly basic α -helix. Each FAS1 repeat exhibits a novel seven-stranded β -wedge with a multiple α -helical fold. Three alternate splice forms are known that are C-terminal to the fourfold FAS1 repeats. These mature molecules are 758 and 761 aa in length. The first shows a one aa substitution for aa 649-706 of the mature molecule. The second shows a one aa substitution for aa 649-676, and a deletion of 27 aa between aa 784-810 of the mature molecule. The significance of the alternate splice forms is not clear. OSF-2 is known to bind to $\alpha_v\beta_3$ and $\alpha_v\beta_5$ integrins. It is synthesized by smooth muscle cells, fibroblasts, osteoblasts, and multiple carcinoma cell types. OSF-2 induces expression of VEGFR2/KDR on endothelial cells (EC) by binding to EC $\alpha_v\beta_3$. It also promotes cell transformation to a tumorigenic phenotype, accompanied by MMP-9 and fibronectin production and cell migration. Mature human OSF-2 is 91%, 96% and 91% aa identical to rat, dog, and mouse OSF-2, respectively.

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