

Periostin [POSTN]

NEW

Specific Periostin ELISA Assays

for Human or Mouse Periostin Detection



- Optimized for detection in cell culture supernatants, serum or plasma.
- Specific and sensitive for the measurement of natural and recombinant human or mouse periostin.
- Reproducible results with low inter- and intra-assay variation.

Periostin (human) ELISA Kit

AG-45B-0004-KI01	96 wells
SPECIES REACTIVITY:	Human
SENSITIVITY:	15 pg/ml
RANGE:	78 to 5000 pg/ml
DETECTION TYPE:	Colorimetric
ASSAY TYPE:	Sandwich
SAMPLE TYPE:	Cell Culture Supernatant, Plasma, Serum

Periostin (mouse) ELISA Kit

AG-45B-0005-KI01	96 wells
SPECIES REACTIVITY:	Mouse
SENSITIVITY:	10 pg/ml
RANGE:	31 to 2000 pg/ml
DETECTION TYPE:	Colorimetric
ASSAY TYPE:	Sandwich
SAMPLE TYPE:	Cell Culture Supernatant, Plasma, Serum

Periostin (human) Matched Pair Detection Set

AG-46B-0005-KI01	For 5 x 96 wells
SPECIES REACTIVITY:	Human
SENSITIVITY:	30 pg/ml
RANGE:	80 to 5000 pg/ml
DETECTION TYPE:	Colorimetric
ASSAY TYPE:	Sandwich
SAMPLE TYPE:	Cell Culture Supernatant, Plasma, Serum

Periostin (mouse) Matched Pair Detection Set

AG-46B-0002-KI01	For 5 x 96 wells
SPECIES REACTIVITY:	Mouse
SENSITIVITY:	20 pg/ml
RANGE:	31 to 2000 pg/ml
DETECTION TYPE:	Colorimetric
ASSAY TYPE:	Sandwich
SAMPLE TYPE:	Cell Culture Supernatant, Plasma, Serum

Detection Sets contain sufficient materials to run ELISAs on 5 x 96-well plates.

NEW Angiocidin

Angiocidin shows both matrix and cytoplasmic distribution. It binds to thrombospondin-1 and $\alpha 2\beta 1$ integrin, and it inhibits tumor progression and angiogenesis. Angiocidin is expressed in various types of cancer.

Angiocidin (human) (rec.)

AG-40B-0061-C010	10 μ g
SOURCE: E. coli. SEQUENCE: Human angiocidin (aa 2-377) is untagged.	

Periostin – Bridge between cancer stem cells (CSCs) and their metastatic niches

Periostin, also termed osteoblast-specific factor 2 (OSF-2), belongs to the family of matricellular proteins. It is composed of a signal sequence, four-coiled fasciclin-like repeats, an N-terminal cysteine-rich region (EMI domain), and heparin-binding domains present in the carboxyl-tail. Periostin contains γ -carboxyglutamate residues that are formed by vitamin K-dependent carboxylation. The N-terminus part of periostin (up to exon 16) is conserved, while the C-terminal region (comprising exon 17-23) gives rise to different splice isoforms upon alternative splicing. The isoforms have a molecular weight range from 83 to 93 kDa. Six different periostin splice isoforms have been reported, but only four of them were sequenced and annotated.

Periostin is known to interact with several integrin molecules on cell surfaces and activating the PI3K/Akt and MAPK pathways during tissue development and remodelling. It functions as a cell adhesion molecule for pre-osteoblasts and is thought to be involved in osteoblast recruitment, attachment and spreading. It is involved in processes such as cell motility, adhesion, metastatic growth, angiogenesis and wound healing.

Periostin is overexpressed in various human tumors and accelerates the development of various tumors by promoting cancer cell survival, epithelial-mesenchymal transition, invasion and metastasis. Recently, it was shown to be crucial for cancer stem cell maintenance. Malanchi, et al. (2012) demonstrated that stromal periostin is crucial in metastatic colonization by regulating the interactions between breast cancer stem cells and their metastatic niches.

Periostin is an interesting cancer biomarker, since its upregulation in cancers usually correlates with aggressiveness and/or poor survival. Additionally, periostin was shown to be a relevant biomarker to diagnose idiopathic pulmonary fibrosis (IPF).

LITERATURE REFERENCES: Interactions between cancer stem cells and their niche govern metastatic colonization: I. Malanchi, et al.; Nature **481**, 85 (2012) • Periostin, a matricellular protein, plays a role in the induction of chemokines in pulmonary fibrosis: M. Uchida, et al.; Am. J. Respir. Cell Mol. Biol. **46**, 677 (2012) • Matricellular proteins: priming the tumour microenvironment for cancer development and metastasis: G.S. Wong & A.K. Rustgi; Br. J. Cancer **108**, 755 (2013)

Specific Periostin Antibodies

anti-Periostin, mAb (Stiny-1)

AG-20B-0033-C100 100 μ g
AG-20B-0033B-C100 Biotin 100 μ g

CLONE: Stiny-1. **ISOTYPE:** Mouse IgG1 κ . **IMMUNOGEN:** Full-length human periostin. **SPECIFICITY:** Recognizes human and mouse periostin. **APPLICATION:** ELISA, IHC (FS, PS), WB.

LIT: Interactions between cancer stem cells and their niche govern metastatic colonization: I. Malanchi, et al.; Nature **481**, 85 (2012)

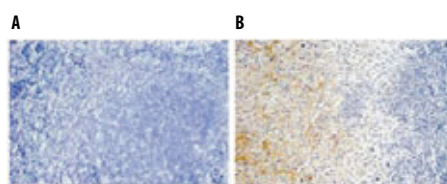


FIGURE: Immunohistochemical staining of endogenous human Periostin in normal breast (A) and human breast cancer (B) tissues (paraffin sections) by using Periostin, mAb (Stiny-1) (Prod. No. AG-20B-0033).

anti-Periostin, mAb (Stiny-3)

AG-20B-0055-C100 100 μ g
AG-20B-0055B-C100 Biotin 100 μ g

CLONE: Stiny-3. **ISOTYPE:** Mouse IgG2b κ . **IMMUNOGEN:** Full-length mouse periostin (isoform 5). **SPECIFICITY:** Recognizes human and mouse periostin. **APPLICATION:** ELISA.

Periostin Protein

Periostin (mouse) (rec.)

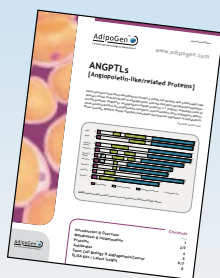
AG-40B-0081-C010 10 μ g
AG-40B-0081-3010 MultiPack 3 x 10 μ g

SOURCE: CHO cells. **SEQUENCE:** Mouse periostin (aa 24-783) (isoform 5) is fused at the C-terminus to a FLAG[®]-tag. **MW:** ~85kDa. **PURITY:** \geq 95% (SDS-PAGE). **ENDOTOXIN CONTENT:** <0.01EU/ μ g.

ANGPTL4 – A matricellular protein involved in cancer metastasis

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