Data Sheet (Cat.No.TMPY-01020)

TargetMol

Periostin/OSF-2 Protein, Human, Recombinant (His)

General Information

Synonyms:	PN;OSF-2;OSF2;periostin;periostin, osteoblast specific factor;PDLPOSTN
Protein Construction:	A DNA sequence encoding the human POSTN isoform 3 (NP_001129407.1) corresponding to amino acid (Met 1-Gln 781) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Asn 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q15063-3
Molecular Weight:	86.4 kDa (predicted); 66-80 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to induce adhesion of ATDC5 mouse chondrogenic cells. When cells are added to POSTN-His coated plates (20μg/mL, 100μL/well), approximately >45% will adhere specifically after 30 minutes at 37℃.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, 5% Trehalose, pH 7.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20℃ to -80℃ for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80℃. For reconstituted protein solutions, the solution can be stored at -20℃ to -80℃ for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Periostin (POSTN), also known as OSF2 (osteoblast specific factor 2), is a heterofunctional secreted extracellular matrix (ECM) protein comprised of four fasciclin domains that promotes cellular adhesion and movement, as well as collagen fibrillogenesis. Postn is expressed in unique growth centers during embryonic development where it

facilitates epithelial-mesenchymal transition (EMT) of select cell populations undergoing reorganization. In the adult, Postn expression is specifically induced in areas of tissue injury or areas with ongoing cellular re-organization. In the adult heart Postn is induced in the ventricles following myocardial infarction, pressure overload stimulation, or generalized cardiomyopathy. Although the detailed function of Postn is still unclear, Postn-integrin interaction is thought to be involved in tumor development. Postn is frequently overexpressed in various types of human cancers, stimulating metastatic growth by promoting cancer cell survival, invasion and angiogenesis, and can be a useful marker to predict the behavior of cancer.

Reference

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