

PRODUCT DATASHEET

Osteoblast Specific Factor 2 Human E. coli

Cat. No.: RD172045100

Type: Recombinant protein

Size: 0.1 mg

Source: E. coli

Species: Human

Description

Total 671 AA. MW: 75 kDa (calculated). UniProtKB acc.no. Q15063. N-Terminal HisTag and Xa – cleavage site 23 AA (highlighted).

Other names

Periostin, PN, OSF-2, POSTN, Fasciclin-I like, Osteoblast Specific Factor 2 (Pleiotrophin, PTN, Heparin-binding growth-associated molecule, HB-GAM, Heparin-binding growth factor 8, HBGF-8, OSF-2, Heparin-binding neurite outgrowth-promoting factor 2, HBNF-2, Heparin-binding brain mitogen, HBBM), NCK

Introduction to the molecule

Periostin is a disulfide linked 90 kDa, 811 amino acid protein originally isolated as a osteoblast-specific factor that functions as a cell adhesion molecule for preosteoblasts and is thought to be involved in osteoblast recruitment, attachment and spreading. Additionally, periostin expression has previously been shown to be significantly increased by both transforming growth factor beta-1(TGFbeta1) and bone morphogenetic protein (BMP-2). OSF-2 has a typical signal sequence, followed by a cysteine-rich domain, a fourfold repeated domain and a C-terminal domain. The fourfold repeated domain of OSF-2 shows homology with the insect protein fasciclin. Periostin mRNA is expressed in the developing mouse embryonic and fetal heart, and that it is localized to the endocardial cushions that ultimately divide the primitive heart tube into a four-chambered heart.

Research topic

Animal studies, Bone and cartilage metabolism, Cardiovascular disease, Cytokines and chemokines and related molecules, Extracellular matrix, Oncology

Amino Acid sequence

MGHHHHHHHH HHSSGHIEGR HMRNNHYDKI LAHSRIRGRD QGPNVCALQQ ILGTTKKYFS TCKNWKYSI CGQKTTVLYE
CCPGYMRMEG MKGCPAVLPI DHVYGTGLIV GATTTQRYSD ASKLRREEIEG KGSFTYFAPS NEAWDNLDSD IRRGLESNVN
VELLNALHSH MINKRMLTKD LKNGMIIPSM YNNLGLFINH YPNGVVTVNC ARIIHGNQIA TNGVVHVIDR VLTQIGTSIQ
DFIEAEDDLS SFRAAAITSD ILEALGRDGH FTLFAPTNEA FEKLPRGVLE RFMGDKVASE ALMKYHILNT LQCSSEIMGG
AVFETLEGNT IEIGCDGDSI TVNGIKMVNK KDIVTNGVI HLIDQVLIPD SAKQVIELAG KQQTTFDLV AQLGLASALR
PDGEYTLAP VNNAFSDDTL SMVQRLLKLI LQNHILKVKV GLNELYNGQI LETIGGKQLR VFVYRTAVCI ENSCMEKGSK
QGRNGAIHIF REIKPAEKS LHEKLKQDKR FSTFLSLLEA ADLKELLTQP GDWTLFVPTN DAFKGMTSEE KEILIRDKNA
LQNIILYHLT PGVFIGKGF PGVTNLIKTT QGSKIFLKEV NDTLLVNELK SKESDIMTTN GVIHVVDKLL YPADTPVGND
QLLEILNKLI KYIQIKFVRG STFKEIPVTY Y

Purity

>90%

Endotoxin

< 0.1 EU/μg

Formulation:

Filtered (0,4 µm) and lyophilized in 0.5 mg/mL in 0.05 M Acetate buffer pH=4.0

Reconstitution:

Add 0.1M Acetate buffer pH=4.0 to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely at 37°C. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10µg/mL. In higher concentrations the solubility of this antigen is limited. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping

On ice. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store the lyophilized protein at -80 °C. Lyophilized protein remains stable until the expiry date when stored at -80 °C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80 °C for long term storage. Reconstituted protein can be stored at 4 °C for a week.

Quality control

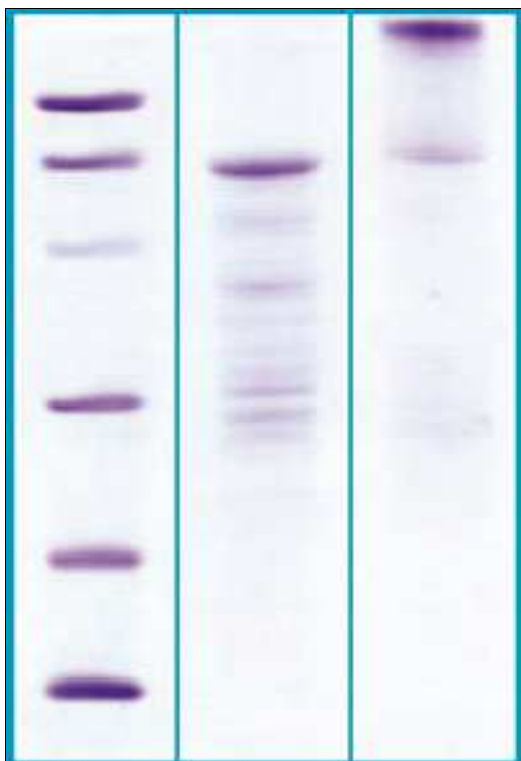
BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

LAL to determine quantity of endotoxin.

Applications

ELISA, Western blotting



12% SDS-PAGE separation of Human OSF-2

1. M.W. marker – 14, 21, 31, 45, 66, 97 kDa

2. reduced and heated sample, 5µg/lane

3. non-reduced and non-heated sample, 5µg/lane