



RayBiotech, Inc.

3607 Parkway Lane suite 200
Norcross, GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Certificate of Analysis and Data Sheet

Recombinant Human Secreted Protein Acidic & Rich in Cysteine (SPARC)

Catalog No.
228-11451

Source:
E.Coli

Synonyms

Osteonectin, ON, Basement-membrane protein 40, BM-40, SPARC, Secreted Protein acidic and Rich in Cysteine.

Introduction

SPARC, an acronym for “secreted protein, acidic and rich in cysteine”, is also known as osteonectin or BM-40. It is the founding member of a family of secreted extracellular matrix proteins with similar domain structure. The 303 amino acid, 43 kDa protein contains a 17 aa signal sequence, an N-terminal acidic region that binds calcium, a follistatin domain containing Kazal-like sequences, and a C-terminal extracellular calcium (EC) binding domain with two EF-hand motifs. SPARC is produced by fibroblasts, capillary endothelial cells, platelets and macrophages, especially in areas of tissue morphogenesis and remodeling. SPARC shows context-specific effects, but generally inhibits adhesion, spreading and proliferation, and promotes collagen matrix formation. For endothelial cells, SPARC disrupts focal adhesions and binds and sequesters PDGF and VEGF. SPARC is abundantly expressed in bone, where it promotes osteoblast differentiation and inhibits adipogenesis.

Description

Human Recombinant SPARC fused with 6X His tag produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 295 amino acids and having a molecular mass of 34 kDa. The protein is purified by proprietary chromatographic techniques.

Purity

Greater than 95.0% as determined by

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



RayBiotech, Inc.

3607 Parkway Lane suite 200
Norcross, GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Formulation

The SPARC (1 mg/ml) was lyophilized after extensive dialyses against 20mM PBS pH-7.4.

Solubility

It is recommended to reconstitute the lyophilized SPARC in sterile 18M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability

The lyophilized protein although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution the protein should be stored at 4°C between 2-7 days and for future use below -18°C.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please prevent freeze-thaw cycles.

Amino Acid Sequence

MSYYHHHHHPQQEALPDETEVVEETVAEVTEVSVGANPVQVEVGEFD
DGAETEETEEVVAENPCQNHCKHKGKVCELDENNTPMCVCQDPTSCP
APIGEFEKVCSDNKTDFDSSCHFFATKCTLEGTKKGHKLHLDYIGPCK
YIPPCLDSELTEFPLMRDWLKNVLVTLYERDEDNNLLTKQKLRVKKI
HENEKRLEAGDHPVELLARDFEKNYNMYIFPVHWQFGQLDQHPIDGY
LSHTELAPLRAPLIPMEHCTTRFFETCDLDNDKYIALDEWAGCFGIKQK
DIDKDLVI .

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**