

## Product Data Sheet

Product Name: SPARC Human  
 Cat. No.: GP24679  
 Batch No.: 1

### Product Data

Purity >98% Source  
 Physical Appearance solid Shipping Condition

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

Amino Acid Sequence MSYYHHHHHPQEQALPDETEVVEETVAEVTEVSVGANPVQVEVGEFDDGAEETEEVVAENPCQNHCKHGKVCELDENNTPMCVCQDPTSCPAI

Solubility It is recommended to reconstitute the lyophilized SPARC in sterile 18MΩ-cm H<sub>2</sub>O not less than 100 µg/ml, which can then be further FormulationThe SPARC (1 mg/ml) was lyophilized after extensive dialyses against 20mM PBS pH-7.4.

### 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 matricellular 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.

### Stability

Lyophilized Osteonectin although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution BM-40 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.

### Background

Osteonectin Human Recombinant 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 BM40 is purified by proprietary chromatographic techniques.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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