



Technical Data Sheet

Recombinant Human SPARC (rHu SPARC)

Human SPARC

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.

Catalog Number:	RC712-18
Source:	<i>Escherichia coli</i>
Molecular Weight:	Approximately 34.0 kDa, a single non-glycosylated polypeptide chain containing 295 amino acids.
Quantity:	10µg /50µg /1mg
Purity:	>95% by SDS-PAGE and HPLC analyses.
Physical Appearance:	Sterile Filtered White Lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2µm filtered concentrated (1mg/ml) solution in 1×PBS, pH 7.4.
AA Sequence:	MSYYHHHHHPQOEALPDETEVVEETVAEVEVSVGANPVQVEVGEFDDGAEETEEVVAE NPCQNHCKKHGKVCELDENNTPMCVCQDPTSCPAIGEFKVCNSDNKTFDSSCHFFATKCT LEGTKKGHKLHLDYIGPCKYIPPCLDSELTFFPLMRDWLKNVLTLYERDEDNNLLTEKQKLRV KKIHENEKRLAEGDHPVELLARDFEKNYNYIFPVHWQFGQLDQHPIDGYLSHTELAPLRAPL IPMEHCTTRFFETCDLDNDKYIALDEWAGCFGIKQKDKDLVI
Endotoxin:	Less than 1EU/µg of rHuSPARC as determined by LAL method.
Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20°C. Further dilutions should be made in appropriate buffered solutions.
Storage:	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long



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term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

Usage:

This material is offered by Bio Basic Inc. for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.