SPARC
Recombinant Human SPARC His

Catalog No.	CSI20110A	**Quantity:**	10 µg
	CSI20110B		50 µg
	CSI20110C		1.0 mg

Alternate Names: BM-40, basement-membrane protein 40, cysteine-rich protein, osteonectin, secreted protein acidic and rich in cysteine

Description: 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 contextspecific 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.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Gene ID: 6678

Source: *E. coli*

Molecular Weight: Approximately 34.0 kDa, a single non-glycosylated polypeptide chain containing 286 amino acids, with expression vector sequence (containing 6 × His tag).

Formulation: Lyophilized from a 0.2 µm sterile filtered solution of PBS, pH 7.4.

Purity: >95% by SDS-PAGE and HPLC analyses.

Endotoxin Level: Less than 1EU/µg of rHuSPARC as determined by LAL method.

Amino Acid Sequence: **MSYYHHHHHH DYDIPTTENL YFQGAMGS**AP QQEALPDETE VVEETVAEVT EVSVGANPVQ VEVGEFDDGA EETEEEVVAE NPCQNHHCKH GKVCELDENN TPMCVCQDPT SCPAPIGEFE KVCSNDNKTF DSSCHFFATK CTLEGTKKGH KLHLDYIGPC KYIPPCLDSE LTEFPLRMRD WLKNVLVTLY ERDEDNNLLT EKQKLRVKKI HENEKRLEAG DHPVELLARD FEKNYNMYIF PVHWQFGQLD QHPIDGYLSH TELAPLRAPL IPMEHCTTRF FETCDLDNDK YIALDEWAGC FGIKQKDIDK DLVI

Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water or aqueous buffer to a concentration of 0.1-1.0 mg/mL. Further dilutions should be made in appropriate buffered solutions.

Storage & Stability: This lyophilized preparation is stable at 2-4°C, but should be kept desiccated at -20°C for long term storage. Upon reconstitution, the preparation is stable for up to one week at 2 -4°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -80°C. **Avoid repeated freeze/thaw cycles.**

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