

□ Cat # RP-992

Recombinant Human Secreted Protein Acidic & Rich in Cysteine

Size: □ 10 ug

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.

#### **SOURCE:**

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

#### **APPLICATION AND SUGGESTED DILUTIONS:**

Greater than 95.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE. Users must optimize the appropriate concentration and conditions for each assay.

#### **STORAGE & 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). 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 diluted to other aqueous solutions.

#### **USAGE:**

This item is for LABORATORY RESEARCH USE ONLY.

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