Datasheet

Cat. No. P1609

Recombinant Human Secreted Protein Acidic and Rich in Cysteine, His

Information

Gene ID	6678
Accession #	P09486
Alternate Names	Basement-membrane Protein 40, BM-40, Osteonectin, ON
Source	Escherichia coli.
M.Wt	Approximately 36.1 kDa, a single non-glycosylated polypeptide chain containing 314 amino acids, with expression vector sequence (containing 6 × His tag).
AA Sequence	MSYYHHHHHH DYDIPTTENL YFQGAMGSAP 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
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
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.
Biological Activity	Fully biologically active when compared to standard. The ED as determined by its ability to inhibit the cell growth of Mv1Lu mink lung epithelial cells is less than 3.0 μg/mL, corresponding to a specific activity of > 333 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10μg	100μg	500μg
Recombinant Human Secreted Protein Acidic and Rich in Cysteine, His	10μg	100μg	500μg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles
- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuSPARC, His as determined by LAL method.

Description

Secreted protein acidic and rich in cysteine (SPARC), also named as osteonectin or BM-40, is an acronym for "secreted protein, acidic and rich in cysteine". It is encoded by the SPARC gene in humans. The protein is a glycoprotein of 40 kDa, (303 amino acid residues) and consists of 17 a.a. 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 the founding member of a family of secreted matricellular proteins with similar domain structure. It is produced by fibroblasts, capillary endothelial cells, platelets and macrophages, especially in areas of tissue morphogenesis and remodeling. SPARC is required for the collagen in bone to become calcified but is also involved in extracellular matrix synthesis and promotion of changes to cell shape. The gene product has been associated with tumor suppression but has also been correlated with metastasis based on changes to cell shape which can promote tumor cell invasion.

Reference

1. Sage H, Decker J, Funk S, et al. 1989. J Mol Cell Cardiol, 21 Suppl 1: 13-22
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3. Lau CP, Poon RT, Cheung ST, et al. 2006. J Pathol, 210: 459-68
4. Rodriguez-Jimenez FJ, Caldes T, Iniesta P, et al. 2007. Oncol Rep, 17: 1301-7
5. Wong SY, Crowley D, Bronson RT, et al. 2008. Clin Exp Metastasis, 25: 109-18

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