Data Sheet (Cat.No.TMPY-01182)

TargetMol

SPARC Protein, Human, Recombinant (His)

General Information

Synonyms:	BM-40;ON;SPARC;secreted protein, acidic, cysteine-rich (osteonectin)
Protein Construction:	Ala18-Ile303
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P09486
Molecular Weight:	33.8 kDa (Predicted); 40-50 kDa (Due to glycosylation)

QC Testing

Biological Activity:	Immobilized Human SPARC, His Tag at 0.5 μg/ml (100 μl/well) on the plate. Dose response curve for Anti-SPARC Antibody, hFc Tag with the EC50 of 0.10 μg/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Secreted protein acidic and rich in cysteine (SPARC/osteonectin/BM40) is one of the most abundant non-collagenous protein expressed in mineralized tissues.The capacity of SPARC to influence pathways involved in extracellular matrix assembly such as procollagen processing and collagen fibril formation as well as the capacity to influence osteoblast differentiation and osteoclast activity will be addressed.

Reference

Yan Q,et al.(1999) SPARC, a matricellular glycoprotein with important biological functions. J Histochem Cytochem. 47(12): 1495-506.
Brekken RA,et al.(2000) SPARC, a matricellular protein: at the crossroads of cell-matrix. Matrix Biol. 19(7): 569-80.
Tai IT,et al.(2008) SPARC in cancer biology: its role in cancer progression and potential for therapy. Drug Resist Updat. 11(6): 231-46.
Podhajcer OL,et al.(2008) The role of the matricellular protein SPARC in the dynamic interaction between the tumor and the host. Cancer Metastasis Rev. 27(3): 523-37.
Kos K,et al.(2010) SPARC: a key player in the pathologies associated with obesity and diabetes. Nat Rev Endocrinol. 6(4): 225-35.