

SPARC Protein, Rat (HEK293, His)

Cat. No.:	HY-P73420
Synonyms:	SPARC; BM-40; Osteonectin; ON; Secreted Protein Acidic and Rich in Cysteine
Species:	Rat
Source:	HEK293
Accession:	P16975 (A18-I301)
Gene ID:	24791
Molecular Weight:	Approximately 33.8-40 kDa

PROPERTIES

AA Sequence	<pre> A P Q T E A A E E M V A E E T V V E E T G L P V G A N P V Q V E M G E F E E G A E E T V E E V V A E N P C Q N H H C K H G K V C E L D E S N T P M C V C Q D P T S C P A P I G E F E K V C S N D N K T F D S S C H F F A T K C T L E G T K K G H K L H L D Y I G P C K Y I A P C L D S E L T E F P L R M R D W L K N V L V T L Y E R D E G N N L L T E K Q K L R V K K I H E N E K R L E A G D H P V E L L A R D F E K N Y N M Y I F P V H W Q F G Q L D Q H P I D G Y L S H T E L A P L R A P L I P M E H C T T R F F E T C D L D N D K Y I A L E E W A G C F G I K E Q D I N K D L V I </pre>
Biological Activity	Measured by its ability to inhibit the cell growth of Mv-1-Lu mink lung epithelial cells. The ED ₅₀ for this effect is typically 3.581 µg/mL, corresponding to a specific activity is 2.793×10 ² U/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	SPARC protein is a cysteine-rich acidic secreted protein, also known as osteonectin or BM-40, and is a matricellular protein
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that regulates cell adhesion, extracellular matrix production, growth factor activity, and cell cycle. SPARC protein does not play a structural function, but has anti-proliferative and anti-adhesive properties that can regulate the interaction between cells and the surrounding extracellular matrix. SPARC protein is able to bind to Ca and Cu, several types of collagen, albumin, thrombospondin, PDGF, and cell membranes. It has two calcium binding sites: one is an acidic domain that can bind 5-8 Ca²⁺ with low affinity, and the other is an EF-hand ring that can bind Ca²⁺ ions with high affinity. SPARC is overexpressed in sites of injury, regeneration, obesity, cancer, and inflammation, and is a potential target and therapeutic indicator for disease treatment and evaluation.

Caution: Product has not been fully validated for medical applications. For research use only.

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