

The Opportunity

Researchers at the National Institute of Advanced Industrial Science and Technology (AIST) of Japan have developed and patented a **Secreted Protein Acidic and Rich in Cysteine (SPARC)** fusion protein.

This protein has been discovered to provide significant utility as a neurological research tool.

Technical Background

Expressed during many stages of development in a variety of organisms, the matricellular protein SPARC (secreted protein acidic and rich in cysteine, also known as *osteonectin* or BM-40) is restricted in adult vertebrates primarily to tissues that undergo consistent turnover or to sites of injury and disease.

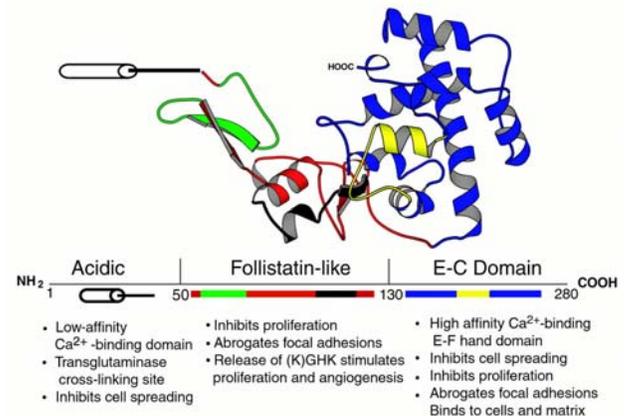
SPARC is a multifunctional glycoprotein that belongs to the matricellular group of proteins. It modulates cellular interaction with the extracellular matrix by its binding to structural matrix proteins, such as collagen and vitronectin, and by its abrogation of focal adhesions, features contributing to a counteradhesive effect on cells.

SPARC inhibits cellular proliferation by an arrest of cells in the G1 phase of the cell cycle. It also regulates the activity of growth factors, such as platelet-derived growth factor (PDGF), fibroblast growth factor (FGF)-2, and vascular endothelial growth factor (VEGF). The expression of SPARC in adult animals is limited largely to remodeling tissue, such as bone, gut mucosa, and healing wounds, and it is prominent in tumors and in disorders associated with fibrosis.

Patented Technology

Current U.S. patent protection includes:

US Patent	Features
6,387,664	<ul style="list-style-type: none"> Thioredoxin SPARC fusion protein ideal for research in neurobiology and for treating various neuropathologies. SPARC fusion protein is derived by fusing SPARC to thioredoxin. Also provides a nucleic acid encoding the fusion protein and a recombinant vector capable of expressing it.



Intellectual Capital

AIST (National Institute of Advanced Industrial Science and Technology) is Japan's extensive public research organization established in 2001. AIST and its predecessors have advanced technology and supported Japanese industries since 1876.

Although not specifically a government institution, AIST is largely funded by the Japanese government.

Comprised of more than 50 autonomous research units in various innovative research fields, about 2500 research scientists and well over 3000 visiting scientists contribute to goals of:

- Sustainable society
- Industrial competitiveness
- Local industrial development
- Industrial technology policies.

AIST Home Page:

www.aist.go.jp/aist_e/about_aist/index.html

For More Information

AIST is seeking to license this technology and provide assistance with its commercialization success to qualified organizations.

Consideration will be provided to a range of financial, strategic, and commercial investment options.

Certain circumstances will warrant consideration for nominal funding from AIST.

Contact:

Mike Allan, Vice President
Tel: 216-881-8526
email: mfallan@firstprincipals.com
Website: <http://www.firstprincipals.com>