

## Product Information

### Attachment and Matrix Factors

Product Number	Description	Source	Storage	Target Cells For Attachment	Concentration For Use	Refs.
S 5174	SPARC (secreted protein acidic and rich in cysteine)	mouse parietal yolk sac (PYS-2) cells	-20°C	Expressed in a variety of tissues, it inhibits cell spreading and diminishes focal contacts in vitro	4-40 µg/ml	52,53
S 5171	SUPERFIBRONECTIN Approx. 300 Bloom	human plasma and recombinant	2-8°C	epithelial cells, mesenchymal cells, neuronal cells, fibroblasts, neural crest cells, endothelial cells	1 µg/ml	54,55, 56,57, 58
T 9427	TENASCIN Lyophilized	human glioblastoma cells	-20°C	epithelial cells, mesenchymal cells, neuronal cells, neural crest cells	10 µg/cm <sup>2</sup>	59,60, 61
T 7043	THROMBOSPONDIN Lyophilized	human platelets	-20°C	Attachment of osteoblasts, bovine aortic endothelial cells, neurons, human melanoma cells; enhances proliferation of mitogen-stimulated smooth muscle cells and fibroblasts	25 ng-50 µg/ml	36,37, 38,39, 40,41, 42,43, 44,45, 46
V 8379	VITRONECTIN	human plasma	2-8°C; store	Cells with integrin receptors that bind vitronectin: platelets, endothelial cells, melanoma cells, osteosarcoma	0.1 µg/cm <sup>2</sup>	26,27, 28,29, 30,31, 32
V 0132		rat plasma	solubilized product			
V 9881		bovine plasma	at 2-8°C			

This table is extracted from the Tissue Culture Technical Information Section of the Sigma Catalog. Please refer to the catalog for the complete table of extracellular matrices/attachment factors and references.

### PRODUCT USE:

#### ■ THROMBOSPONDIN (Product No. T 7043)

Optimal conditions must be determined for each cell line and application.

- 1) Reconstitute with 0.5 ml of tissue culture grade water and sterilize by filtration.
- 2) The resulting solution is slightly hazy and has a concentration of 40 µg/ml.
- 3) Use concentration for thrombospondin in culture has been reported in the range of 25 ng to 50 µg/ml depending upon the application.
- 4) Please refer to the literature for more specific information.

#### ■ VITRONECTIN (Product Nos. V 8379, V 0132, V 9881)

Optimal conditions must be determined for each cell line and application.

- 1) Reconstitute with tissue culture grade water and sterilize by filtration.
- 2) Material is reported to be active at a concentration of 0.1 mg/cm<sup>2</sup> of surface area. Optimal concentrations vary with each cell line.
- 3) Coat culture surface for 1-2 hours at 37°C. Remove any remaining solution and wash with a balanced salt solution before introducing cells and medium.

### REFERENCES:

26. Barnes, D. and Silnutzer, J. (1983). J. Biol. Chem. 258:12548-12552.
27. Barnes, D. et al. (1984). Anal. Biochem. 137:196-204.
28. Silnutzer, J. and Barnes, D. (1984). Biochem Biophys. Res. Commun. 118:339-343.
29. Pytela, R. et al. (1986). Science 231:1559-1562.
30. Charo, I. et al. (1987). J. Biol. Chem. 262:9935-9938.
31. Cheresh, D. and Spiro, R. (1987). J. Biol. Chem. 262:17703-17711.
32. Oldberg, A. et al. (1988). J. Biol. Chem. 263: 19433-19436.
33. Niyibizi, et al. (1984). J. Biol. Chem. 259: 14170.
34. Bailey, A. J., et al. (1979) FEBS Letters 99: 361.
35. Hayashi, M. and Yamada, K. M. (1981). J. Biol. Chem. 256: 11292.

36. Asch, S., et al. (1992). *Biochem. Biophys. Res. Commun.*, 182 (3): 1208-1217.
37. Bagavandoss, P. and Wilks, J. W. (1990). *Biochem. Biophys. Res. Commun.*, 170: 867-872.
38. Good, D. J., et al. (1990). *Proc. Natl. Acad. Sci. USA*, 87: 6624-6628.
39. Lawler, J. W., et al. (1978). *J. Biol. Chem.*, 253 (23): 8609-8616.
40. Majack, R. A., et al. (1985). *J. Cell Biol.*, 101: 1059.
41. Murphy-Ulrich, J. E. and Hook, M. (1989). *J. Cell Biol.*, 109: 1309-1319.
42. Roberts, D. R., et al. (1987). *J. Cell Biol.*, 104: 131-139.
43. Robey, P. G., et al. (1989). *J. Cell Biol.*, 108: 719-727.
44. Santoro, S. A. and Frazier, W. A. (1987). *Methods in Enzymology*, 144: 438-446.
45. Slayter, H. (1989). *Methods in Enzymology*, 169: 251-269.
46. Wight, T. N., et al. (1985). *J. Histochem. Cytochem.*, 33: 295.
47. Huang, D. (1974). *J. Cell Biol.* 62, 881-886.
48. Iozzo, R.V. et al. (1989). *J. Cell. Biochem.* 39, 355-378.
49. Kim, J.J. and H.E. Conrad (1980). *J. Biol. Chem.* 255, 1586-1597.
50. Kleinman, H.K. et al. in *Molecular and Cellular Aspects of Basement Membranes*, Rohrbach, D.H. and Timpl, R., eds. Academic Press, (1993), pp. 309-326.
51. Kleinman, H.K. et al. (1986). *J. Cell Biol.* 102, 2254-2263.
52. Lane, T.F. and Sage, H.E. *FASEB J.*, 8, 163 (1994).
53. Sage, H.E., *J. Cell Biol.*, 109, 341 (1989).
54. Hynes, R.O., page 56 in "Guidebook to the Extracellular Matrix and Adhesion Proteins" Kreis T. and Vale R. eds. (1993) Oxford University Press.
55. Hynes, R.O., "Fibronectins" (1990). Springer-Verlag New York.
56. Chemousov, M.A., Fogerty, F.J., Koteliansky, V.E. and Mosher, D.F., (1991). *J. Biol. Chem.*, 266:10851.
57. Moria, A. and Rouslahti, E., (1992). *J. Biol. Chem.*, 118:421.
58. Moria, A., Zhang, Z. and Rouslahti, E., (1994). *Nature*, 367:193.
59. Hoffman, Stanley, K.L. Crossin and G. M. Edelman, (1988). *J. Cell Biol.* 106:519-532.
60. Chiquet-Ehrismann, R. (1990). *FASEB J.* 4:2598-2604.
61. Aukhil, I., et al. (1990). *Matrix.* 10:98-111.