Key Characteristics of Wharton’s Jelly

Wharton’s jelly is a gelatinous substance in the umbilical cord that provides cushioning and support to the umbilical vein and arteries. The cushioning and protective elements from Wharton’s jelly consist of a network of proteins, pericytes, mesenchymal stem cells, cytokines, chemokines and growth factors.

Analysis of Wharton’s Jelly

440+ Cytokines
- Interleukins
- Growth Factors
- Chemokines

Cells per cm of Umbilical Cord:
MSC: 240,000

Extracellular Matrix Composition:
- Collagen 3.6%
- Glycoprotein 0.3%
- Hyaluronin 0.31%

*All % wet weight

Key Cytokines Present in Wharton’s Jelly

General Cytokines

Fetuin-A
Interleukin 37
Macrophage Colony Stimulating Factor
Serpin A4
Syndecan - 4

Growth Factor Cytokines

Bone Morphogenic Protein - 7
Complement Component 5a
Fibroblast Growth Factor
Platelet Derived Growth Factor - AA
Thrombospondin - 2

Scaffolding Cytokines

Adhesion G Protein
Collagen 1, 2, 3
Elastin
Fibronectin
Hyaluronic Acid

Homeostatic Cytokines

Cystatin - B
Galectin - 9
Granulysin
Lipocalin - 2
Intracellular Adhesion Molecule 1

**Number of check marks reflect relative factor amounts as compared to other Predictive Biotech products. All data represented on this grid is informed by either or all available literature, external validation and internal testing. Empty data fields indicate quantities either found in trace amounts, or quantities not specified in literature. Citations and references on file with Predictive Biotech.**