

FUNCTIONAL HUMAN CORNEAL ENDOTHELIAL CELLS AND APPLICATION THEREOF

[Abstract]

To provide a cell trait assay technique for identifying cultured human corneal endothelium cells of which early clinical effect manifestation and a long-term stable clinical effect are confirmed, in clinical trials. Provided is a method of manufacturing a functional human corneal endothelial cell capable of eliciting a human corneal function when infused into an anterior chamber of a human eye, the method comprising the step of proliferating and/or
5 differentiating or maturing a corneal endothelial progenitor cell under a culture condition capable of minimizing culture stress, such as proliferation stress. Further, provided is a functional human corneal endothelial cell in which expression of a functional protein leading to a corneal
10 endothelial (cell) functional property leading to improvement on corneal opacity and hydrous edema, resulting in continuous and long-term retention of corneal endothelial tissue cell density and improvement on visual acuity is recognized or in which a protein that inhibits the corneal
15 endothelial (cell) functional property is not elicited or is reduced.
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