CLAIMS

[Claim 1]

A method for producing an epithelial cell sheet in which cells that express an epithelial stem cell marker, a proliferating cell marker, and corneal epithelial cell marker keratin 12 and maintain a property as stem cells are present, the method comprising culturing cells derived from oral mucosal epithelial cells on a substrate in a serum-free medium,
wherein the serum-free medium comprises
(i) EGF protein or KGF protein,
(ii) B-27 supplement,
(iii) a ROCK inhibitor, and
(v) one or more catechin.

[Claim 2]

The method according to claim 1, wherein the medium further comprises at least one member selected from the group consisting of
(iv) polysaccharides, and
(vi) corticoids.

[Claim 3]

An epithelial cell sheet obtained by the method according to claim 1 or 2, wherein cells that express an epithelial stem cell marker, a proliferating cell marker, and corneal epithelial cell marker keratin 12 and maintain a property as stem cells are present.

[Claim 4]

A serum-free medium for producing an epithelial cell sheet in which cells that express an epithelial stem cell marker, a proliferating cell marker, and corneal epithelial

cell marker keratin 12 and maintain a property as stem cells are present, using cells derived from oral mucosal epithelial cells, the medium comprising

(i) EGF protein or KGF protein,

(ii) B-27 supplement, and

(iii) a ROCK inhibitor.