Claims

[Claim 1] A pharmaceutical composition for preventing or treating pulmonary diseases, comprising:
at least one selected from the group consisting of HAPLN1 (hyaluronan and proteoglycan link protein 1) protein, a gene coding for the HAPLN1 protein, and an effective agent for promoting the expression or activating the functions of HAPLN1 protein or gene as an active ingredient.

[Claim 2] The pharmaceutical composition for preventing or treating pulmonary diseases of claim 1,
wherein the HAPLN1 protein comprises an amino acid sequence having at least 95% sequence identity with SEQ ID NO:1.

[Claim 3] The pharmaceutical composition for preventing or treating pulmonary diseases of claim 1,
wherein the HAPLN1 protein improves alveolar damages caused by aging or elastic reduction.

[Claim 4] The pharmaceutical composition for preventing or treating pulmonary diseases of claim 1,
wherein the pulmonary diseases are one or more selected from the group consisting of chronic bronchitis, asthma, emphysema, and chronic obstructive pulmonary disease (COPD).

[Claim 5] A health functional food composition for improving or preventing pulmonary diseases, comprising:
at least one selected from the group consisting of HAPLN1 (hyaluronan and proteoglycan link protein 1) protein, a gene coding for the HAPLN1 protein, and an effective agent for promoting the expression or activating the functions of HAPLN1 protein or gene as an active ingredient.

[Claim 6] The health functional food composition for improving or preventing pulmonary diseases of claim 5,
wherein the HAPLN1 protein improves alveolar damages caused by aging or elastic reduction.

[Claim 7] The health functional food composition for improving or preventing pulmonary diseases of claim 5,
wherein the pulmonary diseases are one or more selected from the group consisting of chronic bronchitis, asthma, emphysema, and chronic obstructive pulmonary disease (COPD).

[Claim 8] A method of preventing or treating pulmonary diseases in a subject in need thereof, comprising administering to a subject a pharmaceutical composition of claim 1.

[Claim 9] The method of claim 8,
wherein the HAPLN1 protein improves alveolar damages caused by aging or elastic reduction.

[Claim 10] The method of claim 8,
wherein the pulmonary diseases are one or more selected from the group consisting of chronic bronchitis, asthma, emphysema, and chronic obstructive pulmonary disease (COPD).