Patent Documents:

[0005]

Patent Document 1: JP2005-162699A;

Patent Document 2: JP2004-323401A;

Patent Document 3: JP05-117295A;

Patent Document 4: JP2002-145736A;

Patent Document 5: JP2005-530883A;

Patent Document 6: JP11-343235A.

Non-Patent Documents:

[0006]

Non-Patent Document 1: "Usefulness of Cosmetics, Evaluation Techniques and Future Overview", supervised by Katsu~~hiko~~yuki TAKEDA, published by YAKUJI NIPPO LIMITED (2001);

Non-Patent Document 2: Takayuki Omori, FRAGRANCE JOURNAL, extra (special) issue, No. 14, 1995, 118-126.

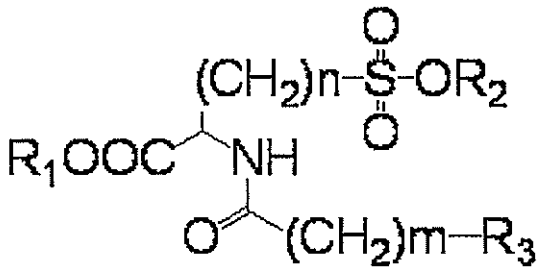
SUMMARY OF THE INVENTION

[0007] The present invention has been made under the circumstances as described above, an object of which is to provide a prophylactic or ameliorating agent for pigmentation having a novel scaffold which is preferably usable to prevent or ameliorate pigmentation, and an external preparation for skin which contains the same as a component.

[0008] Taking the foregoing circumstances into

CLAIMS

1. A prophylactic or ameliorating agent for pigmentation, comprising a compound represented by the following general formula (1), an isomer thereof, and/or a pharmacologically acceptable salt thereof:



(1)

[wherein:

R_1 represents a hydrogen atom or a linear chain or branched alkyl group having 1 to 8 carbon atom(s);

R_2 represents a hydrogen atom, a substituted or unsubstituted aliphatic hydrocarbon group having 1 to 8 carbon atom(s), a substituted or unsubstituted aromatic group, a substituted or unsubstituted polycyclic fused aromatic group, or a substituted or unsubstituted heterocyclic group having a 5 to 12 carbon atoms;

R_3 represents a substituted or unsubstituted aromatic group, a substituted or unsubstituted polycyclic fused aromatic group, or a substituted or unsubstituted heterocyclic group having a 5 to 15 carbon atoms;

n represents an integer of 1 or 2, and m represents an integer of 0 to 3.]

2. The prophylactic or ameliorating agent for pigmentation according to claim 1, wherein in the general formula (1);

R_1 represents a hydrogen atom or a linear chain or branched alkyl group having 1 to 8 carbon atom(s);

R_2 represents a hydrogen atom;

R_3 represents a substituted or unsubstituted aromatic group, a substituted or unsubstituted polycyclic fused aromatic group, or a substituted or unsubstituted heterocyclic group having a 5 to 15 carbon atoms;

n represents an integer of 1 or 2, and m represents an integer of 0 to 3.

3. The prophylactic or ameliorating agent for pigmentation according to claim 1 or 2, wherein in the general formula (1);

R_1 represents a hydrogen atom or a linear chain or branched alkyl group having 1 to 8 carbon atom(s);

R_2 represents a hydrogen atom;

R_3 represents a substituted or unsubstituted aromatic group, a substituted or unsubstituted polycyclic fused aromatic group, or a substituted or unsubstituted heterocyclic group having a 5 to 15 carbon atoms;

n represents an integer of 1 or 2, and m represents 0.

4. The prophylactic or ameliorating agent for

pigmentation according to any one of claims 1 to 3, wherein in the general formula (1);

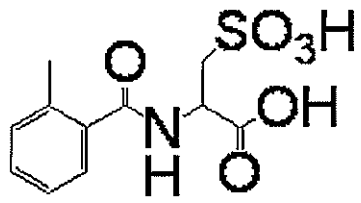
R_1 represents a hydrogen atom or a linear chain or branched alkyl group having 1 to 8 carbon atom(s);

R_2 represents a hydrogen atom;

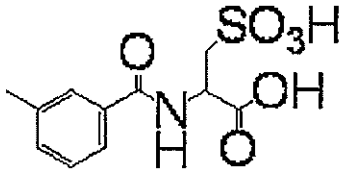
R_3 represents a substituted or unsubstituted aromatic group, a substituted or unsubstituted polycyclic fused aromatic group, or a substituted or unsubstituted heterocyclic group having a 5 to 15 carbon atoms;

n represents 1, and m represents 0.

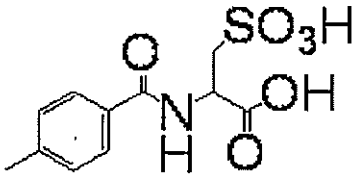
5. The prophylactic or ameliorating agent for pigmentation according to any one of claims 1 to 3, wherein the compound represented by the general formula (1) is N-(o-toluoyl)cysteic acid (Compound 1), N-(m-toluoyl)cysteic acid (Compound 2), N-(p-toluoyl)cysteic acid (Compound 3), N-(p-methoxybenzoyl)cysteic acid (Compound 4), N-(4-phenylbenzoyl)cysteic acid (Compound 5), N-(p-toluoyl)homocysteic acid (Compound 6), an isomer thereof, and/or a pharmacologically acceptable salt thereof:



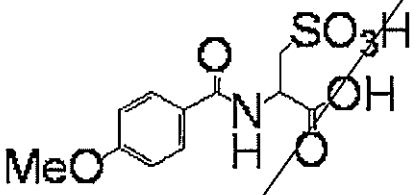
N-(o-toluoyl)cysteic acid (Compound 1);



N-(m-toluoyl)cysteic acid (Compound 2);



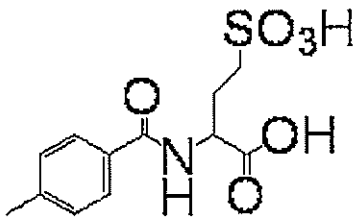
N-(p-toluoyl)cysteic acid (Compound 3);



N-(p-methoxybenzoyl)cysteic acid (Compound 4);



N-(4-phenylbenzoyl)cysteic acid (Compound 5);



N-(p-toluoyl)homocysteic acid (Compound 6).

6. An external preparation for skin, containing the prophylactic or ameliorating agent for pigmentation as defined in any one of claims 1 to 5.

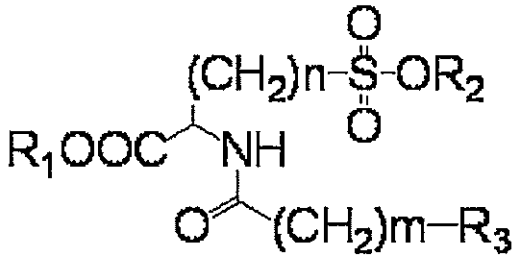
7. The external preparation for skin according to claim 6, wherein 0.0001% by mass to 20% by mass of the prophylactic or ameliorating agent for pigmentation is contained with respect to a total amount of the external preparation for skin.

8. The external preparation for skin according to claim 6 or 7, wherein the external preparation for skin is a cosmetic preparation (provided that quasi-drug is included).

9. An external preparation for skin for skin whitening, containing the compound represented by the general formula (1), the isomer thereof, and/or the pharmacologically acceptable salt thereof.

CLAIMS

1. An agent when used for prophylaxis or amelioration of pigmentation, comprising a compound represented by the following general formula (1), an isomer thereof, and/or a pharmacologically acceptable salt thereof:



(1)

[wherein:

R_1 represents a hydrogen atom or a linear chain or branched alkyl group having 1 to 8 carbon atom(s);

R_2 represents a hydrogen atom, a substituted or unsubstituted aliphatic hydrocarbon group having 1 to 8 carbon atom(s), a substituted or unsubstituted aromatic group, a substituted or unsubstituted polycyclic fused aromatic group, or a substituted or unsubstituted heterocyclic group having a 5 to 12 carbon atoms;

R_3 represents a substituted or unsubstituted aromatic group, a substituted or unsubstituted polycyclic fused aromatic group, or a substituted or unsubstituted heterocyclic group having a 5 to 15 carbon atoms;

n represents an integer of 1 or 2, and m represents an integer of 0 to 3.]

2. The agent when used for prophylaxis or amelioration of pigmentation according to claim 1, wherein in the general formula (1);

R_1 represents a hydrogen atom or a linear chain or branched alkyl group having 1 to 8 carbon atom(s);

R_2 represents a hydrogen atom;

R_3 represents a substituted or unsubstituted aromatic group, a substituted or unsubstituted polycyclic fused aromatic group, or a substituted or unsubstituted heterocyclic group having a 5 to 15 carbon atoms;

n represents an integer of 1 or 2, and m represents an integer of 0 to 3.

3. The agent when used for prophylaxis or amelioration of pigmentation according to claim 1 or 2, wherein in the general formula (1);

R_1 represents a hydrogen atom or a linear chain or branched alkyl group having 1 to 8 carbon atom(s);

R_2 represents a hydrogen atom;

R_3 represents a substituted or unsubstituted aromatic group, a substituted or unsubstituted polycyclic fused aromatic group, or a substituted or unsubstituted heterocyclic group having a 5 to 15 carbon atoms;

n represents an integer of 1 or 2, and m represents 0.

4. The agent when used for prophylaxis or amelioration of pigmentation according to any one of claims 1 to 3, wherein in the general formula (1);

R_1 represents a hydrogen atom or a linear chain or

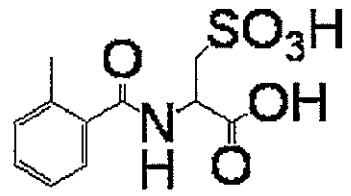
branched alkyl group having 1 to 8 carbon atom(s);

R_2 represents a hydrogen atom;

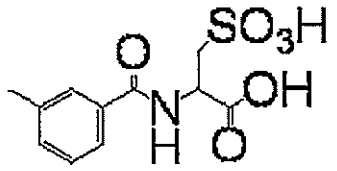
R_3 represents a substituted or unsubstituted aromatic group, a substituted or unsubstituted polycyclic fused aromatic group, or a substituted or unsubstituted heterocyclic group having a 5 to 15 carbon atoms;

n represents 1, and m represents 0.

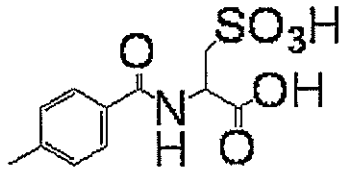
5. The agent when used for prophylaxis or amelioration of pigmentation according to any one of claims 1 to 3, wherein the compound represented by the general formula (1) is N-(o-toluoyl)cysteic acid (Compound 1), N-(m-toluoyl)cysteic acid (Compound 2), N-(p-toluoyl)cysteic acid (Compound 3), N-(p-methoxybenzoyl)cysteic acid (Compound 4), N-(4-phenylbenzoyl)cysteic acid (Compound 5), N-(p-toluoyl)homocysteic acid (Compound 6), an isomer thereof, and/or a pharmacologically acceptable salt thereof:



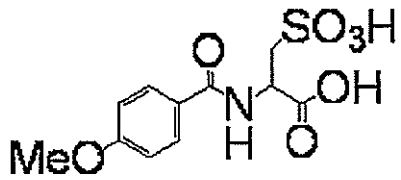
N-(o-toluoyl)cysteic acid (Compound 1);



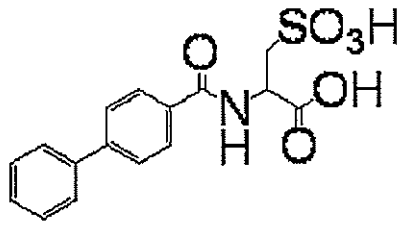
N-(m-toluoyl)cysteic acid (Compound 2);



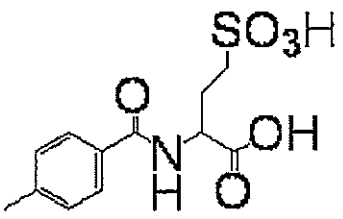
N-(p-toluoyl)cysteic acid (Compound 3);



N-(p-methoxybenzoyl)cysteic acid (Compound 4);



N-(4-phenylbenzoyl)cysteic acid (Compound 5);



N-(p-toluoyl)homocysteic acid (Compound 6).

6. An external preparation for skin, containing the agent when used for prophylaxis or amelioration of pigmentation as defined in any one of claims 1 to 5.

7. The external preparation for skin according to claim 6, wherein 0.0001% by mass to 20% by mass of the agent when used for prophylaxis or amelioration of pigmentation is contained with respect to a total amount of the external preparation for skin.

8. The external preparation for skin according to claim 6 or 7, wherein the external preparation for skin is a cosmetic preparation.

9. An external preparation when used for skin whitening, containing the compound represented by the general formula (1), the isomer thereof, and/or the pharmacologically acceptable salt thereof.