

Claims

[Claim 1] A compound or a salt thereof, wherein the compound is selected from the group consisting of:

5 1-{5-[(4-[3-methoxy-5-(trifluoromethyl)phenyl]-5-{[(2R)-2-methylpiperidin-1-yl]methyl}-1,3-thiazol-2-yl)carbamoyl]pyrazin-2-yl}piperidine-4-carboxylic acid,
1-(5-[(4-(4-chloro-2-thienyl)-5-{[(2R)-2-methylpyrrolidin-1-yl]methyl}-1,3-thiazol-2-yl)carbamoyl]pyrazin-2-yl)piperidine-4-carboxylic acid,
10 1-{5-[(5-{[(2R)-2-ethylpyrrolidin-1-yl]methyl}-4-[3-fluoro-5-(trifluoromethyl)phenyl]-1,3-thiazol-2-yl)carbamoyl]pyrazin-2-yl}piperidine-4-carboxylic acid, and
1-{5-[(5-{[(2R)-2-ethylpyrrolidin-1-yl]methyl}-4-[4-methoxy-3-(trifluoromethyl)phenyl]-1,3-thiazol-2-yl)carbamoyl]pyrazin-2-yl}piperidine-4-carboxylic acid.

15 [Claim 2] The compound or a salt thereof according to claim 1, wherein the compound is

1-{5-[(4-[3-methoxy-5-(trifluoromethyl)phenyl]-5-{[(2R)-2-methylpiperidin-1-yl]methyl}-1,3-thiazol-2-yl)carbamoyl]pyrazin-2-yl}piperidine-4-carboxylic acid.

20 [Claim 3] The compound or a salt thereof according to claim 1, wherein the compound is

1-(5-[(4-(4-chloro-2-thienyl)-5-{[(2R)-2-methylpyrrolidin-1-yl]methyl}-1,3-thiazol-2-yl)carbamoyl]pyrazin-2-yl)piperidine-4-carboxylic acid.

25 [Claim 4] The compound or a salt thereof according to claim 1, wherein the compound is

1-{5-[(5-{[(2R)-2-ethylpyrrolidin-1-yl]methyl}-4-[3-fluoro-5-(trifluoromethyl)phenyl]-1,3-thiazol-2-yl)carbamoyl]pyrazin-2-yl}piperidine-4-carboxylic acid.

30 [Claim 5] The compound or a salt thereof according to claim 1, wherein the compound is

1-{5-[(5-{[(2R)-2-ethylpyrrolidin-1-yl]methyl}-4-[4-methoxy-3-(trifluoromethyl)phenyl]-1,3-thiazol-2-yl)carbamoyl]pyrazin-2-yl}piperidine-4-carboxylic acid.

[Claim 6] A pharmaceutical composition comprising the compound or a salt thereof according to claim 1, and a pharmaceutically acceptable excipient.

5 [Claim 7] The pharmaceutical composition according to claim 6, for preventing or treating bladder or urinary tract diseases, related to bladder contraction by a muscarinic M₃ receptor.

10 [Claim 8] The pharmaceutical composition according to claim 6, for preventing or treating voiding dysfunctions or storage dysfunctions in underactive bladder, hypotonic bladder, acontractile bladder, detrusor underactivity, or neurogenic bladder.

15 [Claim 9] Use of the compound or a salt thereof according to claim 1, for the manufacture of a pharmaceutical composition for preventing or treating bladder or urinary tract diseases, related to bladder contraction by a muscarinic M₃ receptor.

[Claim 10] Use of the compound or a salt thereof according to claim 1, for preventing or treating bladder or urinary tract diseases, related to bladder contraction by a muscarinic M₃ receptor.

20 [Claim 11] The compound or a salt thereof according to claim 1, for preventing or treating bladder or urinary tract diseases, related to bladder contraction by a muscarinic M₃ receptor.

Claims

[Claim 1] A compound or a salt thereof, wherein the compound is selected from the group consisting of:

5 1-{5-[4-[3-methoxy-5-(trifluoromethyl)phenyl]-5-{{(2R)-2-methylpiperidin-1-yl)methyl}-1,3-thiazol-2-yl]carbamoyl}pyrazin-2-yl}piperidine-4-carboxylic acid,
1-(5-{{4-(4-chloro-2-thienyl)-5-{{(2R)-2-methylpyrrolidin-1-yl)methyl}-1,3-thiazol-2-yl]carbamoyl}pyrazin-2-yl}piperidine-4-carboxylic acid,
10 1-{5-[5-{{(2R)-2-ethylpyrrolidin-1-yl)methyl}-4-[3-fluoro-5-(trifluoromethyl)phenyl]-1,3-thiazol-2-yl]carbamoyl}pyrazin-2-yl}piperidine-4-carboxylic acid, and
1-{5-[5-{{(2R)-2-ethylpyrrolidin-1-yl)methyl}-4-[4-methoxy-3-(trifluoromethyl)phenyl]-1,3-thiazol-2-yl]carbamoyl}pyrazin-2-yl}piperidine-4-carboxylic acid.

15 [Claim 2] The compound or a salt thereof according to claim 1, wherein the compound is

1-{5-[4-[3-methoxy-5-(trifluoromethyl)phenyl]-5-{{(2R)-2-methylpiperidin-1-yl)methyl}-1,3-thiazol-2-yl]carbamoyl}pyrazin-2-yl}piperidine-4-carboxylic acid.

20 [Claim 3] The compound or a salt thereof according to claim 1, wherein the compound is

1-(5-{{4-(4-chloro-2-thienyl)-5-{{(2R)-2-methylpyrrolidin-1-yl)methyl}-1,3-thiazol-2-yl]carbamoyl}pyrazin-2-yl}piperidine-4-carboxylic acid.

25 [Claim 4] The compound or a salt thereof according to claim 1, wherein the compound is

1-{5-[5-{{(2R)-2-ethylpyrrolidin-1-yl)methyl}-4-[3-fluoro-5-(trifluoromethyl)phenyl]-1,3-thiazol-2-yl]carbamoyl}pyrazin-2-yl}piperidine-4-carboxylic acid.

[Claim 5] The compound or a salt thereof according to claim 1, wherein the compound is

35 1-{5-[5-{{(2R)-2-ethylpyrrolidin-1-yl)methyl}-4-[4-methoxy-3-(trifluoromethyl)phenyl]-1,3-thiazol-2-yl]carbamoyl}pyrazin-2-yl}piperidine-4-carboxylic acid.

[Claim 6] A pharmaceutical composition comprising the compound or a salt thereof according to claim 1, and a pharmaceutically acceptable excipient.

5 [Claim 7] The compound or a salt thereof according to claim 1, for use in the prevention or treatment of bladder or urinary tract diseases, related to bladder contraction by a muscarinic M₃ receptor.

10 [Claim 8] The compound or a salt thereof according to claim 1, for use in the prevention or treatment of voiding dysfunctions or storage dysfunctions in underactive bladder, hypotonic bladder, acontractile bladder, detrusor underactivity, or neurogenic bladder.

15 [Claim 9] Use of the compound or a salt thereof according to claim 1, for the manufacture of a pharmaceutical composition for preventing or treating bladder or urinary tract diseases, related to bladder contraction by a muscarinic M₃ receptor.