CLAIMS

1.A pharmaceutical composition containing as active compound the PI3K-Class I inhibitor compound: 5-(7-methanesulfonyl-2-morpholin-4-yl-6,7-dihydro-5H-pyrrolo[2,3-d]pyrimidin-4-yl)-pyrimidin-2-amine or the pharmaceutically acceptable salt thereof, for use in an anticancer treatment in association with a second anticancer compound provided that said second compound is not the monoclonal antibody trastuzumab or the compound everolimus, and wherein said second anticancer compound is selected from the group comprising an antibody such as an anti-HER2 antibody different from trastuzumab, an EGF anti-receptor antibody, an antibody that inhibits the vascular endothelial growth factor-A (VEGF-A), a degrader/modulator of the estrogen receptor (ER) or an epidermal growth factor receptor (EGFR) inhibitor or a protein kinase inhibitor.

2. The pharmaceutical composition according to claim 1, wherein said second anticancer compound is selected from the group comprising cetuximab, bevacizumab, fulvestrant, or gefitinib.

3. The pharmaceutical composition according to any one of claims 1 or 2 for use in an anticancer treatment of colon cancer, prostate cancer, breast cancer, lung cancer, ovarian cancer.

4. The pharmaceutical composition according to claim 3 for use in the treatment of colorectal cancer with mutations of PI3KCA and *wild-type* KRAS, of colorectal cancer with mutations of PI3KCA and KRAS, of non-small cell lung carcinoma (NSCLC) with or without mutation on PI3KCA and EGFR, HER2-positive breast carcinoma with PI3KCA mutation, HER2-positive and ER-positive breast cancer.

5. The pharmaceutical composition according to any one of claims 1 to 4 suitable for the oral administration of the PI3k-Class I inhibitor, for use in association with a

composition containing the second anticancer compound.

6. The pharmaceutical composition according to claim 5 comprising a quantity of PI3K-Class 1 inhibitor sufficient for a unitary dosage of 1 to 10 mg/Kg body weight.

7. The pharmaceutical composition according to claim 6 for a unitary dosage of the PI3K-Class 1 inhibitor from 5 to 7 mg/Kg body weight.

8. The pharmaceutical composition according to any one of claims 5 to 7 for use in association with a pharmaceutical composition suitable for the oral or parental administration of the second anticancer compound.

9. The pharmaceutical composition according to claim 8 for use in association with a pharmaceutical composition comprising a quantity of the second anticancer compound suitable for a unitary dosage of 10 to 80 mg/Kg body weight.

10. The pharmaceutical composition according to claim 9 for use in association with a pharmaceutical composition comprising a quantity of the second anticancer compound suitable for a unitary dosage of 20 to 70 mg/Kg body weight, preferably from 30 to 50 mg/Kg body weight.

11.Kit of parts comprising a pharmaceutical composition containing as active compound the PI3K-Class I inhibitor compound: 5-(7-methanesulfonyl-2-morpholin-4-yl-6,7-dihydro-5H-pyrrolo[2,3-d]pyrimidin-4-yl)-pyrimidin-2-amine or the pharmaceutically acceptable salt thereof, and a second pharmaceutical composition containing a second anticancer compound, provided that said second compound is not the monoclonal antibody trastuzumab or the compound everolimus, and wherein said second anticancer compound is selected from the group comprising an anti-HER2 antibody different from trastuzumab, an EGF anti-receptor antibody, an antibody that inhibits the vascular endothelial growth factor-A (VEGF-A), a degrader/modulator of the estrogen

receptor (ER) or an epidermal growth factor receptor (EGFR) inhibitor, or a protein kinase inhibitor, for use in an anticancer combination treatment.

12.Kit of parts according to claim 11, wherein said second anticancer compound is selected from the group comprising cetuximab, bevacizumab, fulvestrant, or gefitinib.

13.Kit of parts according to any one of claims 11 to 12 wherein the anticancer combination treatment is colon, prostate, breast, lung, ovarian cancer.

14.Kit of parts according to claim 13 for use in a combination treatment of colorectal carcinoma with mutations of PI3KCA and *wild-type* KRAS, of colorectal carcinoma with mutations of PI3KCA and KRAS, of non-small cell lung carcinoma (NSCLC) with or without mutation on PI3KCA and EGFR, HER2-positive breast cancer with PI3KCA mutation, HER2-positive and ER-positive breast cancer.

15.Kit of parts according to any one of claims 11 to 14 wherein the first pharmaceutical composition comprises a quantity of PI3K-Class 1 inhibitor sufficient for a unitary dosage of 1 to 10 mg/Kg body weight, preferably from 5 to 7 mg/Kg body weight.

16.Kit of parts according to claim 15 wherein the second composition comprises a quantity of the second anticancer compound suitable for a unitary dosage of 10 to 80 mg/Kg body weight, preferably from 20 to 70 mg/Kg or from 30 to 50 mg/Kg body weight.

17.Kit of parts according to any one of claims 11 to 16 wherein the first composition is suitable for the oral administration of the PI3k-Class I inhibitor, and the second composition is suitable for the oral or parental administration.