[0011] In certain examples, provided herein are methods for achieving a Response Evaluation Criteria in Solid Tumors (RECIST 1.1) of complete response, partial response or stable disease, improving International Workshop Criteria (IWC) for NHL, improving International Uniform Response Criteria for Multiple Myeloma (IURC), improving Eastern Cooperative Oncology Group Performance Status (ECOG) or improving Response Assessment for Neuro-Oncology (RANO) Working Group for GBM comprising administering an effective amount of a TOR kinase inhibitor to a patient having a solid tumor, non-Hodgkin lymphoma or multiple myeloma. In some examples, the TOR kinase inhibitor is a compound as described herein.

[0011a] In one aspect, provided herein is use of 7-(6-(2-hydroxypropan-2-yl)pyridin-3-yl)-1-(*trans*-4-methoxycyclohexyl)-3,4-dihydropyrazino[2,3-b]pyrazin-2(1H)-one or a pharmaceutically acceptable salt, stereoisomer or tautomer thereof in the manufacture of a medicament for the treatment of a solid tumor, wherein the solid tumor is a neuroendocrine tumor of gut origin, of non-pancreatic origin, or of unknown primary origin; symptomatic endocrine producing neuroendocrine tumor; a nonfunctional neuroendocrine tumor; a locally unresectable, metastatic moderate, well differentiated, low (grade 1) or intermediate (grade 2) neuroendocrine tumor; non-small cell lung cancer; glioblastoma multiforme; hepatocellular carcinoma; breast cancer; colorectal cancer; salivary cancer; pancreatic cancer; adenocystic cancer; or adrenal cancer.

[0012] The present examples can be understood more fully by reference to the detailed description and examples, which are intended to exemplify non-limiting examples.

4. DETAILED DESCRIPTION

4.1 DEFINITIONS

[0013] An “alkyl” group is a saturated, partially saturated, or unsaturated straight chain or branched non-cyclic hydrocarbon having from 1 to 10 carbon atoms, typically from 1 to 8 carbons or, in some embodiments, from 1 to 6, 1 to 4, or 2 to 6 or carbon atoms. Representative alkyl groups include -methyl, -ethyl, -n-propyl, -n-butyl, -n-pentyl and -n-hexyl; while saturated branched alkyls include -isopropyl, -*sec*-butyl, -isobutyl, -*tert*-butyl, -isopentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 2,3-dimethylbutyl and the like. Examples of unsaturared alkyl groups include, but are not limited to, vinyl, allyl, -CH=CH(CH_3), -CH=C(CH_3)$_2$, -C(CH_3)=CH_2, -C(CH_3)=CH(CH_3), -C(CH_2CH_3)=CH_2, -C≡CH, -C≡C(CH_3), -C≡C(CH_2CH_3), -CH_2C≡CH, -CH_2C≡C(CH_3) and -CH_2C≡C(CH_7CH_3), among others. An alkyl group can be substituted or unsubstituted. In certain embodiments, when the alkyl groups described herein are said to be “substituted,” they may be substituted with any substituent or substituents as those found in the exemplary compounds and embodiments disclosed herein, as well as halogen (chloro, iodo, bromo, or

CLAIMS

What is claimed is:

1. Use of 7-(6-(2-hydroxypropan-2-yl)pyridin-3-yl)-1-(*trans*-4-methoxycyclohexyl)-3,4-dihydropyrazino[2,3-b]pyrazin-2(1H)-one or a pharmaceutically acceptable salt, stereoisomer or tautomer thereof in the manufacture of a medicament for the treatment of a solid tumor, wherein the solid tumor is a neuroendocrine tumor of gut origin, of non-pancreatic origin, or of unknown primary origin; symptomatic endocrine producing neuroendocrine tumor; a nonfunctional neuroendocrine tumor; a locally unresectable, metastatic moderate, well differentiated, low (grade 1) or intermediate (grade 2) neuroendocrine tumor; non-small cell lung cancer; glioblastoma multiforme; hepatocellular carcinoma; breast cancer; colorectal cancer; salivary cancer; pancreatic cancer; adenocystic cancer; or adrenal cancer.

2. The use of claim 1, wherein the solid tumor is an advanced solid tumor.

3. The use of claim 1, wherein the neuroendocrine tumor is of gut origin, of non-pancreatic origin, or of unknown primary origin.

4. The use of claim 1, wherein the neuroendocrine tumor is a symptomatic endocrine producing tumor or a nonfunctional tumor.

5. The use of claim 1, wherein the neuroendocrine tumor is locally unresectable, metastatic moderate, well differentiated, low (grade 1) or intermediate (grade 2).

6. The use of claim 1, wherein the solid tumor is non-small cell lung cancer, glioblastoma multiforme, hepatocellular carcinoma, breast cancer, colorectal cancer, salivary cancer, pancreatic cancer, adenocystic cancer or adrenal cancer.

7. The use of claim 6, wherein the breast cancer is ER+/Her2-, ER+/Her2+, ER-/Her2+ or triple negative (TN).

8. The use of claim l, wherein a complete response, partial response or stable disease, as determined by the Response Evaluation Criteria in Solid Tumors (RECIST 1.1) is achieved.

9. The use of claim 1, wherein an Eastern Cooperative Oncology Group Performance Status (ECOG) or Response Assessment for Neuro-Oncology (RANO) Working Group for glioblastoma multiforme is improved.

10. The use of claim 6, wherein the solid tumor is non-small cell lung cancer.

11. The use of claim 6, wherein the solid tumor is breast cancer.

12. The use of claim 6, wherein the solid tumor is glioblastoma multiforme.

13. The use of claim 6, wherein the solid tumor is hepatocellular carcinoma.