

In light of the foregoing, the well-designed detection tools targeting the aforesaid V384D mutation shall be helpful and valuable medical industry and clinical use. Although several researches have presented some primers and probes for the aforesaid purpose, the goal of the present invention is to provide a primer set and/or a probe being more specific and sensitive than the conventional ones.

SUMMARY

In light of the foregoing, one of the objective of the present invention is to provide a kit for cancer detection by using a promising biomarker.

Another objective of the present invention is to provide a kit for evaluating the efficacy of an EGFR-TKI treatment and/or the progression-free survival of a subject after the same so that the follow-up treating strategies can be set up as soon as possible after an EGFR-TKI treatment.

In order to achieve the above-mentioned objective, the present invention provides a kit for identifying a V384 alteration of a *MLH1* gene encoded protein of a subject, comprising:

a first primer comprising SEQ ID NO 06; and a second primer comprising SEQ ID NO 07; and/or

a first primer comprising SEQ ID NO 08; and a second primer comprising SEQ ID NO 09.

Preferably, said kit further comprises a third primer comprising SEQ ID NO 05.

Preferably, said kit of claim 1, further comprising a DNA polymerase.

Preferably, said kit further comprises a double stranded DNA binding dye.

Preferably, said double stranded DNA binding dye is SYBR® Green I, SYBR® Green II, SYBR® Gold, Oxazole Yellow, Thiazole Orange, PicoGreen, EvaGreen®, a combination thereof.

The present invention also provides a kit for identifying a V384 alteration of a *MLH1* gene encoded protein of a subject, comprising:

a first primer comprising SEQ ID NO 08; and

a second primer comprising SEQ ID NO 09.

The present invention also provides kit for identifying a V384 alteration of a *MLH1* gene encoded protein of a subject, comprising:

at least one mutation probe comprising SEQ

CLAIMS

1. A kit for identifying a V384 alteration of a *MLH1* gene encoded protein of a subject, comprising:

a first primer comprising a sequence of SEQ ID NO 06; and

5 a second primer comprising a sequence of SEQ ID NO 07.

2. The kit of claim 1, further comprising a third primer comprising a sequence of SEQ ID NO 05.

3. The kit of claim 1, further comprising a DNA polymerase.

4. The kit of claim 1, further comprising a double stranded DNA binding dye.

- 10 5. The kit of claim 4, wherein said double stranded DNA binding dye is SYBR[®] Green I, SYBR[®] Green II, SYBR[®] Gold, Oxazole Yellow, Thiazole Orange, or PicoGreen.

6. A kit for identifying a V384 alteration of a *MLH1* gene encoded protein of a subject, comprising:

a first primer comprising a sequence of SEQ ID NO 08; and

15 a second primer comprising a sequence of SEQ ID NO 09.

7. The kit of claim 6, further comprising a DNA polymerase.

8. The kit of claim 6, further comprising a double stranded DNA binding dye.

9. The kit of claim 6, wherein said double stranded DNA binding dye is EvaGreen[®], or a combination thereof.