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Jewell et al.

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(54) **METHOD AND COMPOSITIONS FOR DETECTING EPIDERMAL GROWTH FACTOR RECEPTOR VARIANT FORMS IN CANCER CELLS**

(71) Applicant: **Abbott Molecular Inc.**, Des Plaines, IL (US)

(72) Inventors: **Susan S. Jewell**, Elmhurst, IL (US);
John C. Russell, Chicago, IL (US);
Larry E. Morrison, Phoenix, AZ (US)

(73) Assignee: **Abbott Molecular Inc.**, Des Plaines, IL (US)

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CPC **C12Q 1/6886** (2013.01); **C12Q 2600/106** (2013.01); **C12Q 2600/156** (2013.01)

(58) **Field of Classification Search**
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See application file for complete search history.

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Primary Examiner — Juliet Switzer

Assistant Examiner — Joseph G Dauner

(74) *Attorney, Agent, or Firm* — Klintworth & Rozenblat IP LLC

(57) **ABSTRACT**

Method and compositions for screening for the presence of Epidermal Growth Factor Receptor variant 3 (EGFR(v3)) in a sample are described. The method comprises obtaining a sample containing a plurality of cells; hybridizing a set of chromosomal probes to the sample, wherein the set comprises an EGFR(v3)-probe and a probe to chromosome 7 different from an EGFR(v3)-probe; and visualizing the hybridization pattern of the set of chromosomal probes in the plurality of cells of the sample, wherein the presence of at least one copy of chromosome 7 lacking a hybridization signal of the EGFR(v3)-probe in at least one cell is indicative of the presence of the EGFR(v3) in the sample. The method and compositions are suitable for diagnosing the therapeutic outcome for treating a patient having a cancer with an anti-EGFR therapeutic agent and for screening a sample for a predisposition for forming an EGFR-associated cancer.

16 Claims, 1 Drawing Sheet

