

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of detecting a prostate cancer in a subject, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers APPL1 (Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1, APPL1), Sortilin-1 (SORT1), and Syndecan-1 (SDC1) in a biological sample from the subject as compared to a reference.
2. The method of claim 1, wherein the reference is a normal or benign prostate tissue or a normal blood or plasma sample.
3. The method of claim 1 or 2, wherein the method comprises detecting elevated levels of APPL1, SORT1 and SDC1.
4. The method of any one of claims 1 to 3, wherein the endosomal biomarkers are proteins or nucleic acids.
5. A method of detecting and measuring the severity of a prostate cancer in a subject, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: APPL1, SORT1, and SDC1, from a biological sample of the subject as compared to a reference.
6. The method of claim 5, wherein the method comprises determining the progression of the prostate cancer in the subject.
7. A method of monitoring the progression of a prostate cancer in a subject, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: APPL1, SORT1, and SDC1 in a biological sample from the subject as compared to a reference.
8. A method of detecting a prostate cancer in a subject, the method comprising:

obtaining a biological sample from the subject;
processing the biological sample to allow detection of at least the following three endosomal markers: APPL1, SORT1, and SDC1;
detecting, in each biomarker, one or more of an altered presence, level, secretion and distribution of the selected biomarker in the processed sample; and
identifying a prostate cancer and/or the progression of the cancer in the subject.

9. A method for detecting a prostate cancer in a subject, the method comprising:
obtaining a biological sample from the subject;
processing the biological sample to allow detection of at least the following three endosomal markers: APPL1, SORT1, and SDC1;
comparing, in each biomarker, the presence, level, secretion and distribution of the selected markers; optionally with one or more other markers known to be indicative of the presence or absence of prostate cancer in the subject; and
identifying prostate cancer in the subject.
10. A method of detecting a prostate cancer in a subject, the method comprising:
processing a biological sample from said subject to allow detection of at least the following three endosomal markers: APPL1, SORT1, and SDC1;
comparing the presence, level, secretion and distribution of the selected markers; optionally with one or more other markers known to be indicative of the presence or absence of prostate cancer in the subject; and
identifying prostate cancer and/or the progression of the cancer in the subject.
11. A method of detecting a prostate cancer in a subject, the method comprising:
obtaining a biological sample from the subject;
processing the sample to allow detection of at least the following three endosomal markers: APPL1, SORT1, and SDC1; and
detecting one or more of an altered presence, level, secretion and distribution of these selected markers in the processed sample; and
identifying a prostate cancer and/or the progression of the cancer in the subject, wherein the subject is effectively treated for the prostate cancer according to the biomarker pattern.

12. A method for diagnosing and treating a prostate cancer in a subject, the method comprising:
detecting APPL1, SORT1, and SDC1 from the subject; and
treating the subject based on one or more of the presence, level, secretion and distribution of the selected markers detected, with a cancer therapy.
13. A method of determining the likelihood of the presence of a prostate cancer in a subject, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers APPL1, SORT1, and SDC1 in a biological sample from the subject as compared to a reference.
14. A method of identifying a subject suffering from prostate cancer who is likely to be responsive to a cancer therapy, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers APPL1, SORT1, and SDC1 in a biological sample of the subject as compared a reference.
15. A method of predicting the risk of recurrence of prostate cancer in a subject following a cancer therapy, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers APPL1, SORT1, and SDC1 in a biological sample of the subject as compared a reference.