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(54) **COMPOSITIONS AND METHODS OF DISEASE DIAGNOSIS AND THERAPY**

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(58) **Field of Search** 435/6, 7.23; 536/23.5, 536/23.1, 24.3, 24.31

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(57) **ABSTRACT**

The invention pertains to isolated nucleic acid molecules containing sequences specified herein, to mutant CD36 genes and their encoded gene products, to methods of screening blood or a blood product by detecting a CD36 gene mutation, methods of administering blood or a blood product based on the presence or absence of a CD36 gene mutation, to methods of matching a biological sample donor with a recipient based on detection of a mutation in the CD36 gene, methods of determining the resistance of a patient to infection by a parasite by detecting a CD36 gene mutation, methods of diagnosing a disease associated with a defect in insulin action, glucose metabolism, fatty acid metabolism, and/or catecholamine action by detecting a mutation in the CD36 gene, and methods of disease treatment by altering the mutation(s).

18 Claims, 30 Drawing Sheets