THE INVENTION

The invention relates to the identification of a biomarker specifically located in the plasma membrane of pancreatic cells. It was selected by a Systems Biology approach on Massively Parallel Signal Sequencing datasets obtained in human islets and Affymetrix microarray datasets on human islets, purified rat primary beta and non beta cells and insulinoma cells. Based on a set of specific features the biomarker is a unique candidate for imaging and targeting strategies to study the pancreatic beta cell mass in health and disease (T1 diabetes, T2 diabetes, obesity, islet transplantation, beta cell regeneration).

POTENTIAL APPLICATIONS

The aim of the present invention is to provide a unique candidate for imaging and targeting strategies to study the pancreatic beta cell mass in health and disease (T1 diabetes, T2 diabetes, pancreatic cancers, obesity, islet transplantation, beta cell regeneration).

KEY ADVANTAGE OF THE TECHNOLOGY

- Unique, specific and reliable markers for the beta cells of the pancreatic islets of Langerhans
- Markers useful for beta cell specific targeting and non-invasive imaging
- Markers not induced by inflammation and not expressed in pancreas surrounding tissues