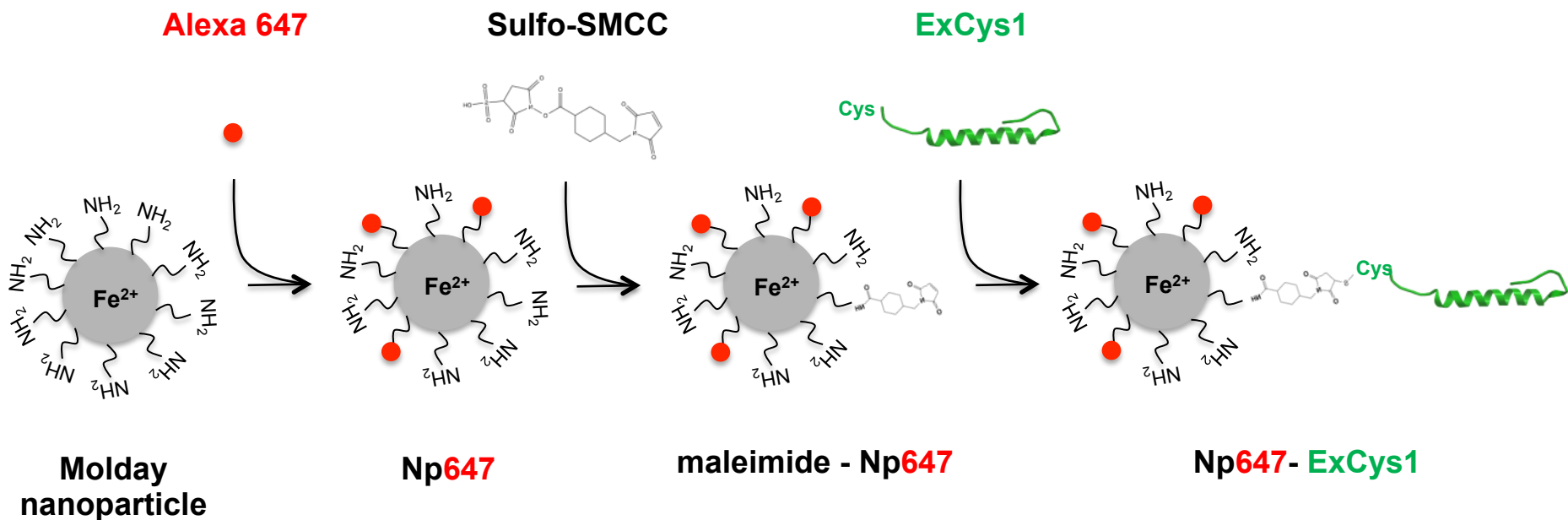




ESM Fig.1. Schematic view of the protocol for the production of the exendin-nanoparticle probe.

Iron oxide nanoparticles were chosen to decrease the MRI signal after specific targeting to beta cells by exendin-4, which binds to GLP-1R of the beta-cell membrane. To generate the probe, nanoparticles were first tagged with Alexa 647 for fluorescence localization, modified by the attachment of a sulfo-SMCC linker for binding the targeting peptide, and eventually reacted with an exendin-4 peptide, which was modified by addition of a Cys at position one, for targeting beta-cells. The same protocol was followed to synthesize the non-targeted nanoparticles, excepting that exendin-4 was replaced by the scrambled peptide (ExScra) of exendin-4.