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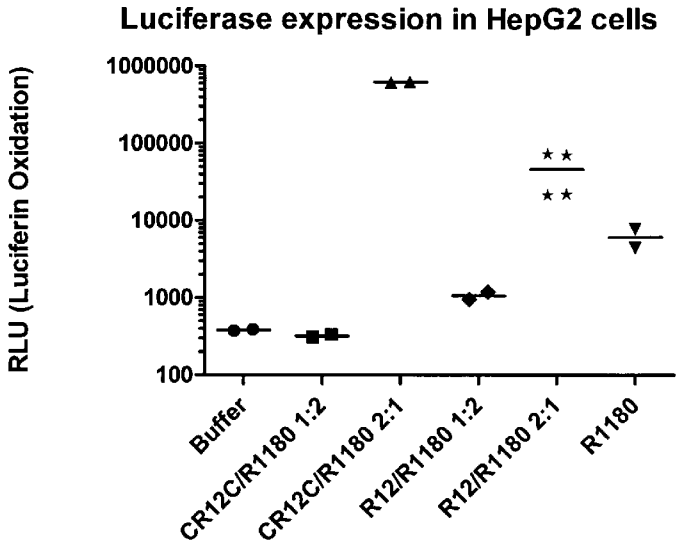
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(54) Title: COMPLEXATION OF NUCLEIC ACIDS WITH DISULFIDE-CROSSLINKED CATIONIC COMPONENTS FOR TRANSFECTION AND IMMUNOSTIMULATION



(57) Abstract: The present invention is directed to a polymeric carrier cargo complex, comprising as a cargo at least one nucleic acid (molecule) and disulfide-crosslinked cationic components as a (preferably non-toxic and non-immunogenic) polymeric carrier. The inventive polymeric carrier cargo complex allows for both efficient transfection of nucleic acids into cells *in vivo* and *in vitro* and/or for induction of an (innate and/or adaptive) immune response, preferably dependent on the nucleic acid to be transported as a cargo. The present invention also provides, pharmaceutical compositions, particularly vaccines and adjuvants, comprising the inventive polymeric carrier cargo complex and optionally an antigen, as well as the use of such the inventive polymeric carrier cargo complex and optionally an antigen for transfecting a cell, a tissue or an organism, for (gene-)therapeutic purposes as disclosed herein, and/or as an immunostimulating agent or adjuvant, e.g. for eliciting an immune response for the treatment or prophylaxis of diseases as mentioned above. Finally, the invention relates to kits containing the inventive polymeric carrier cargo complex and/or the inventive pharmaceutical composition, adjuvant or vaccine in one or more parts of the kit.

WO 2012/013326 A1

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