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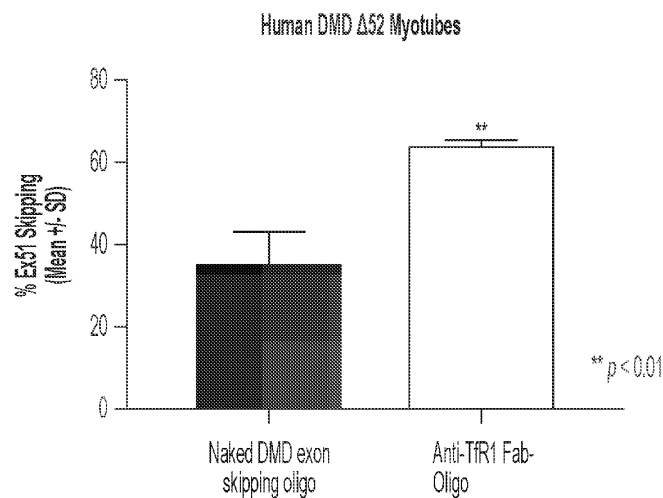


FIG. 1A

(57) Abstract: Aspects of the disclosure relate to compositions comprising a plurality of complexes comprising an antibody (e.g., anti-TfR1 antibody) covalently linked to one or more oligonucleotides (e.g. a phosphorodiamidate morpholino oligomer), each oligonucleotide being covalently linked at a linkage site represented by a lysine (K) residue of the antibody. In some embodiments, the antibody comprises a heavy chain comprising a heavy chain variable region (VH) and a heavy chain constant region, and a light chain comprising a light chain variable region (VL) and a light chain constant region, wherein at least 80% (e.g., 80%-98%, 80%-95%, 80%-90%, 85%-98%, 85%-95%, 85%-90%, 90%-98%, or 90%-95%) of the light chain constant regions of the antibodies of the complexes in the composition are independently covalently linked to an oligonucleotide at a linkage site represented by K188 (based on Kabat numbering) and/or a linkage site represented by K190 (based on Kabat numbering) of the light chain constant region of each antibody.

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