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(54) Title: SSEA-4 BINDING MEMBERS

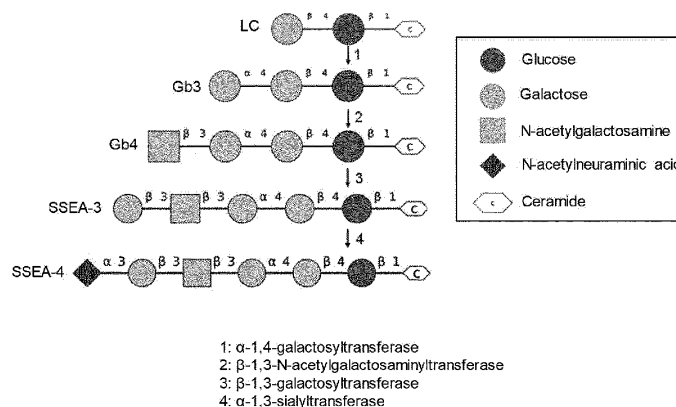


Fig. 1

Schematic diagram of the generation of SSEA-3 and SSEA-4 glycans from lactosylceramide (LC).

(57) Abstract: The disclosure relates to the expression of stage-specific embryonic antigen 4 (SSEA-4) on stem memory T-cells (TSCM), which can then be used as a target to isolate, activate and expand this T cell subset both in vivo and in vitro. It also relates to the pharmaceutical antibody composition binding SSEA-4 targeting TSCM, as well as methods for use thereof. The antibody of the disclosure recognises the SSEA-4 glycolipid and induces proliferation of TSCM which could be used to sort this unique population from blood for clinical expansion for adoptive T-cell transfer of T-cell receptor (TCR) transduced, chimeric antigen receptor (CAR)-T transduced or cells for haematopoietic stem cell transplant. Methods of use include, without limitation, in cancer therapies and diagnostics. Examples related to the antibody with the designation F2811.72.

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