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(54) Title: T CELL RECEPTOR-LIKE ANTIBODIES SPECIFIC FOR A WT1 PEPTIDE PRESENTED BY HLA-A2

(57) Abstract: The present invention provides antigen binding proteins that specifically bind to Wilms' tumor protein (WT1), including humanized, chimeric and fully human antibodies against WT1, antibody fragments, chimeric antigen receptors (CARs), fusion proteins, and conjugates thereof. The antigen binding proteins and antibodies bind to HLA-A0201-restricted WT1 peptide. Such antibodies, fragments, fusion proteins and conjugates thereof are useful for the treatment of WT1 associated cancers, including for example, breast cancer, ovarian cancer, prostate cancer, chronic myelocytic leukemia, multiple myeloma, acute lymphoblastic leukemia (ALL), acute myeloid/myelogenous leukemia (AML) and myelodysplastic syndrome (MDS). In more particular embodiments, the anti-WT1/A antibodies may comprise one or more framework region amino acid substitutions designed to improve protein stability, antibody binding and/or expression levels.

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