

GS3-4 Preparation of chimeric monoclonal antibodies against tumor-specific light chains of CD98 amino-acid transporters

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In recent years, therapeutic monoclonal antibodies (mAbs) have been widely noticed as novel anticancer drugs. Therapeutic mAbs can generally destroy cancer cells by ADCC or CDC. We focus upon LAT1 and γ^+ LAT2 CD98 light chains, 12-pass membrane amino-acid transporters that are expressed on various human malignancies. Because of their complicated and scarce extracellular regions, specific mAbs could not be developed. We have recently succeeded in the production of anti-human LAT1 and γ^+ LAT2 mAbs. Anti-LAT1 mAbs reacted with various human cancer cells irrespective with tissue origins and induced the internalization of LAT1 protein, so, a chimeric mAb was prepared. We will discuss the specificity and usefulness of a chimeric anti-LAT1 mAb.

