Ublituximab (TGTX-1101), A Novel Anti-CD20 Monoclonal Antibody, Demonstrates Activity in Rituximab-sensitive and Rituximab-resistant B-cells Non-Hodgkin Lymphoma (B-NHL) Pre-clinical in vitro and in vivo Models

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Abstract

Ublituximab is a glycoengineered anti-CD20 monoclonal antibody with enhanced ADCC activity

Materials and Methods

Ublituximab induced higher levels of ADCC than rituximab in vitro

Ublituximab and rituximab reduced viability by a similar degree in MCL cells

Ublituximab and rituximab had no impact on the cell cycle in various lymphoma cell lines

Ublituximab caused a higher degree of CDC lysis in patient-derived tumor cells than rituximab

Conclusions

- Ublituximab reduces higher antibody dependent cellular cytotoxicity than rituximab in vitro
- Ublituximab and rituximab reduce viability equally in the presence of a high-antibody blocking antibody.
- Neither antiublituximab or rituximab has significant effects on the cell cycle or apoptosis.
- Ublituximab and rituximab prolong survival to an equal extent in an in vivo Burkitt's lymphoma SCID mouse model.
- Ublituximab is more effective in reducing complement dependent cytotoxicity in primary tumor cells than rituximab.

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