

## A Novel Approach for Treating Cancer and Collagen-Associated Diseases by Using Anti-LOXL-2 Antibody (Yeda)

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[Irit Sagi](#), Biology, Biological Regulation

### Summary

Disruption to the Extra-Cellular Matrix (ECM) is associated with many pathological conditions, such as various cancer types and tissue fibrosis, and also correlates with high tumor malignancy. Therefore, controlling ECM composition and morphology is considered a potential treatment for cancer and other ECM-associated diseases, such as liver fibrosis. Presently, there is no therapeutic agent which can manipulate ECM properties for such types of diseases, and **therefore a pressing need exists for ECM-modulating agents for the treatment of collagen-associated pathologies**. The team led by Prof. Irit Sagi has developed a monoclonal antibody (mAb) which can be targeted against the enzyme lysyl-oxidase like 2 (LOXL-2). An enzyme known to be expressed in numerous cancer types, and has been shown to be associated with enhanced cancer progression and metastasis. Subsequently LOXL-2 inhibition is associated with reduced metastasis and improved clinical outcome, therefore this new anti-LOXL-2 mAb could provide a useful tool to treat cancer development, and possibly other ECM-related pathologies.

### Applications

Inhibiting growth and development of various cancers, including triple negative breast cancer. Possible treatment for other ECM-related pathologies, such as fibrosis.

### Advantages


**Large scope** - Can be used for a variety of malignancies and other collagen-associated diseases.

**Flexible** - Can be used as a complementary treatment for conventional therapeutic methods

### Technology's Essence

The research group led by Prof. Irit Sagi from the Weizmann Institute of Science (WIS) has investigated tumor micro-environments, and developed an antibody against LOXL-2 one of the main inducers of collagen assembly. This anti-LOXL-2 antibody has enabled the Sagi group to inhibit the growth and proliferation of cancer cells both in vitro and in vivo.

#### Contact for more information:

Yael Klionsky , Licensing Officer, +972-8-9344095

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Yeda Research and Development Co. Ltd. - Technology Transfer from the Weizmann Institute. P.O. Box 95, Rehovot, 76100, Israel. Tel: +972-8-947-0617