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Biologic inhibitors for therapeutic targeting the receptor tyrosine kinase AXL

Stanford researchers have identified a novel approach to directly inhibit the receptor tyrosine kinase AXL (also known as UFO, ARK, and Tyro7) from interacting with its ligand, GAS6. Receptor tyrosine kinases, (RTKs) are frequent targets of oncogenic mutations in cancer and have been shown to play critical roles in tumor progression. This class of proteins has also proven to be an effective therapeutic target for cancer. The researchers have identified a number of effective biological inhibitors for AXL activity, including soluble AXL receptor protein spanning amino acids 1-451, neutralizing AXL antibody that recognizes an epitope in the extracellular domain of AXL, and an antibody against GAS6. These inhibitors focus on interfering with the ligand-inducible kinase activity of AXL and thereby may help treat metastatic cancer and other diseases with increased AXL activity.

Applications

- Therapeutic use as biologics for cancer

Advantages

- Novel approach to treating metastatic cancer and other diseases with biologics
- Reduced potential for side effects
- Highly targeted and effective

Publications

- Rankin EB, Fuh KC, Taylor TE, Krieg AJ, Musser M, Yuan J, Wei K, Kuo CJ, Longacre TA, Giaccia AJ. AXL Is an Essential Factor and Therapeutic Target for Metastatic Ovarian Cancer. Cancer Res. 2010 Oct 1;70(19):7570-9. Epub 2010 Sep 21.

Patents

- Published Application: WO2011091305
- Published Application: 20130017205
- Published Application: 20130108644
- Published Application: 20140065143
- Published Application: 20160108378
- Issued: 8,618,254 (USA)
- Issued: 9,074,192 (USA)
- Issued: 9,266,947 (USA)

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