JNB809 ActYbody™: Lead Stage Bispecific IgG Antibody that Blocks PD-L1 and Activates GITR for Immunotherapy

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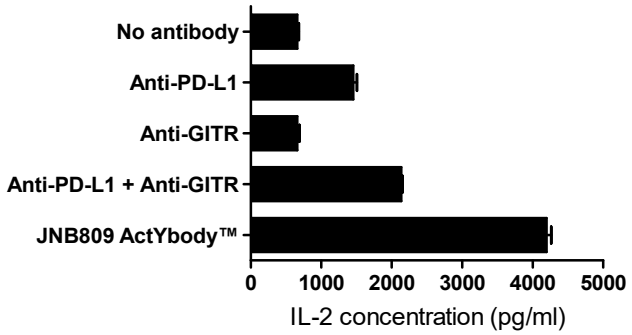
Summary: JNB809 ActYbody™ is a proprietary bispecific humanized IgG/kappa antibody that binds to (i) PD-L1 antagonistically to inhibit the interaction with PD-1 and (ii) GITR agonistically to trigger intracellular signaling for enhancement of immune responses. JNB809 is a promising therapeutic for immunotherapy that potently stimulates the activity of T cells greater than each of the parental anti-PD-L1 and anti-GITR IgG antibodies or their combination.

Expression and Purification: JNB809 is composed of two engineered heavy chains and two intact light chains. JNB809 was expressed in CHO-K1 stable transfectants and purified from culture supernatants by protein A chromatography following a standard procedure for IgG antibodies. Purified JNB809 showed a single dominant peak at a position of its expected size by gel filtration.

Company Overview: JN Biosciences is a privately-held biotechnology company focused on generation of innovative antibody engineering technologies and novel antibody therapeutics. We have generated other ActYbodies™, including one blocking PD-L1 and activating OX40, that are more potent for stimulation of immune cells than each of the parental IgG antibodies or their mixture. We recently outlicensed an anti-checkpoint antibody to a biotechnology company and it is being tested in clinical studies.

Activation of T Cells: JNB809 potently increased IL-2 expression in T cells when compared to each of the parental monospecific IgG antibodies (Anti-PD-L1 and Anti-GITR) or a combination of them (Anti-PD-L1 + Anti-GITR).



PHA-treated human PBMC were incubated for one day in RPMI 1640 + 10% FBS with (a) no antibody, (b) 1 μg/ml anti-PD-L1 IgG, (c) 1 μg/ml anti-GITR IgG, (d) 1 μg/ml anti-PD-L1 IgG and 1 μg/ml anti-GITR IgG, and (e) 1 μg/ml JNB809 ActYbody™ in a 96-well plate coated with 1 μg/ml of OKT3 (anti-CD3). IL-2 concentration in culture supernatants was measured by ELISA.

Highlights of JNB809:

- Blocks PD-L1 and activates GITR as a single agent therapeutic
- More potent than each of the parental anti-PD-L1 and anti-GITR IgG antibodies or their combination for enhancement of T cell activity
- Expected to have a human IgG-like half-life in the body
- Expresses well in CHO-K1 transfectants and purified by protein A chromatography
- Functionally and structurally stable in PBS
- Patent pending (composition of matter)
- 18 to 24 months to IND filing

Business Development Inquiries: JN Biosciences is seeking a licensee for development and commercialization of JNB809 and other ActYbodies™. Please send inquiries to Mr. Jade Brown at JBJade1996@aol.com, TEL:425-647-8878.