

# Anti-IL-2 Antibodies And Compositions And Uses Thereof

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## TECHNOLOGY DESCRIPTION

UCSF, Pfizer, and Stanford investigators developed a novel anti-IL2 mAb for the treatment of autoimmune and inflammatory diseases, including without limitation, Type I diabetes mellitus, psoriasis, Crohn's disease, adult respiratory distress syndrome, rheumatoid arthritis, systemic lupus erythematosus (SLE), multiple sclerosis, and autoimmune thyroiditis. Unlike other treatments for autoimmune and inflammatory diseases, this antibody targets the underlying pathogenic pathway rather than merely treating the symptoms.

Specifically, when complexed with IL-2, this antibody can selectively expand regulatory T-cells (Tregs) by releasing IL-2 specifically to Tregs.

Existing low dose IL-2 and IL-2 Mutein therapies show clinical promise, but have a narrow therapeutic window. Too high doses can cause cancer, while insufficient doses are ineffective. The specificity of the therapeutic described here would allow for higher doses without carcinogenic side effects. Furthermore, this antibody complex is less complicated to manufacture than Pegylated IL2.

## RELATED MATERIALS

- ▶ ["A Human anti-IL-2 Antibody That Potentiates Regulatory T Cells by a Structure-Based Mechanism", Nature Medicine](#)
- ▶ [There is one issued US patent and several pending US and foreign patent applications](#)
- ▶ [Engineering a Single-Agent Cytokine/Antibody Fusion That Selectively Expands Regulatory T Cells for Autoimmune Disease Therapy](#)

## PATENT STATUS

Country	Type	Number	Dated	Case
New Zealand	Issued Patent	741404	06/25/2024	2014-100
Australia	Issued Patent	2016340989	01/04/2024	2014-100
China	Issued Patent	ZL 201680068098.1	07/19/2022	2014-100
Japan	Issued Patent	7030689	02/25/2022	2014-100
United States Of America	Issued Patent	<a href="#">10,138,298</a>	11/27/2018	2014-100
European Patent Office	Published Application	3365369	08/29/2018	2014-100
Rep Of Korea	Published Application	10-2018-0064541	06/14/2018	2014-100

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## OTHER INFORMATION

### KEYWORDS

autoimmune, inflammatory disease, type I diabetes, lupus

### CATEGORIZED AS

- ▶ [Medical](#)
- ▶ [Disease: Autoimmune and Inflammation](#)

### RELATED CASES

2014-100-6

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