ANB032, an Investigational BTLA Agonist Antibody, Reduced T Cell Proliferation, Inflammatory Cytokine Secretion, and Prolonged Survival in a Mouse Model of Graph versus Host Disease (GvHD)

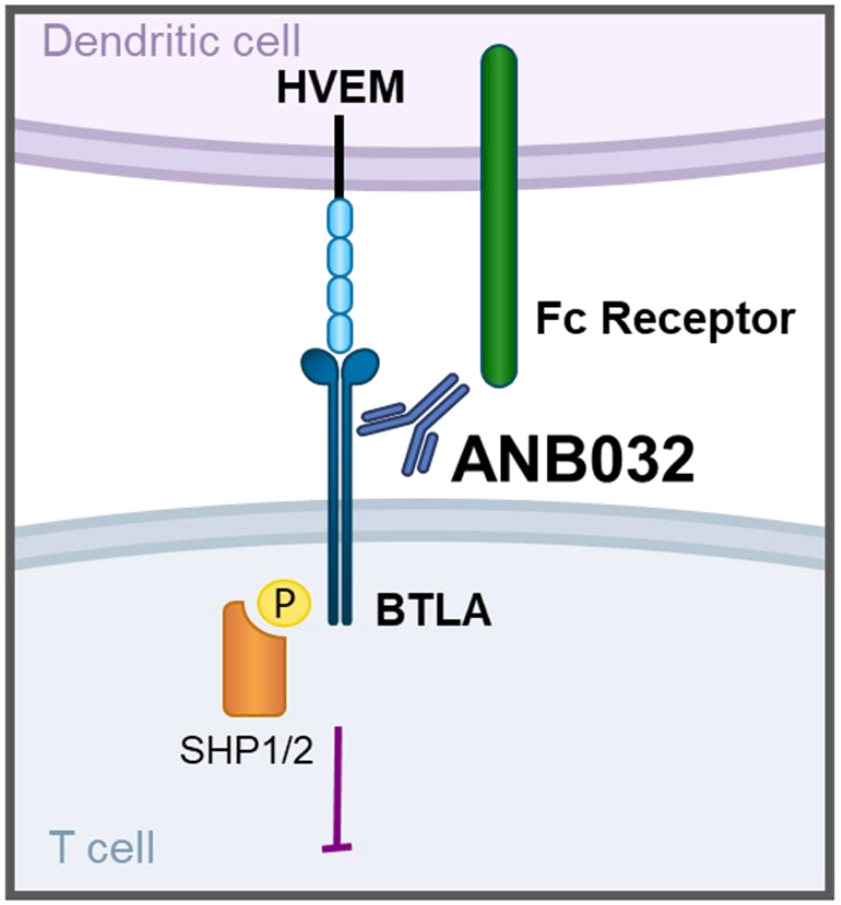
Eric Hare, Matthew Hsu, Cheryl Schendel, Chris Haines, Pejman Soroosh, Stephen Parmley, Martin Dahl, Paul Lizzul

AnaptysBio, Inc.
San Diego, CA, USA

Disclosures: All authors are employees and stockholders of Anaptys

BTLA is a Key Node of Immune Regulation and Target for ANB032

B and T Lymphocyte Attenuator (BTLA): Potent modulator of T cells, B cells, and dendritic cells



Proposed Mechanism of Action for ANB032

ANB032: IgG4 antibody (non-depleting)

- Binds to BTLA on membrane proximal epitope
- Fc receptor binding profile contributes to differentiated potency
- Non-blocking of HVEM engagement

ANB032's agonist signal modulates immune cells

- Inhibits activated T cell proliferation
- Reduces inflammatory cytokine secretion
- Modulates DC function, including inducing T regs

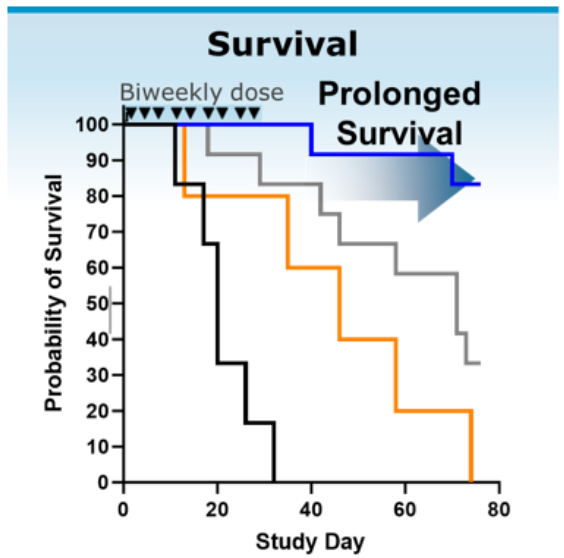
ANB032 was Efficacious in a Preclinical Model of GvHD

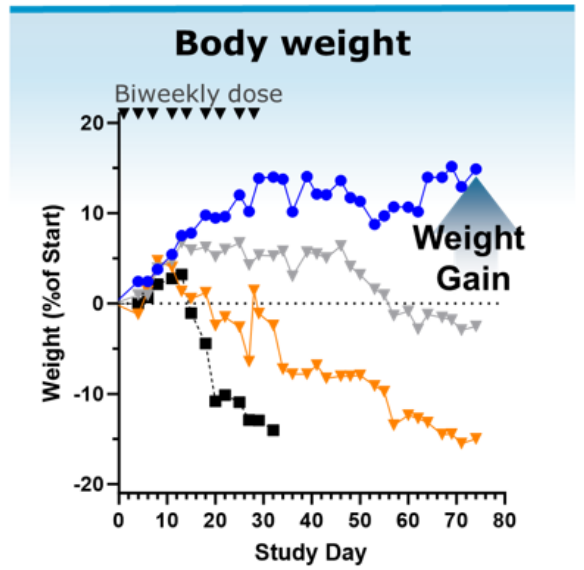
Evaluating the Contribution of Both Epitope Binding and FcR Engagement to Efficacy In Vivo

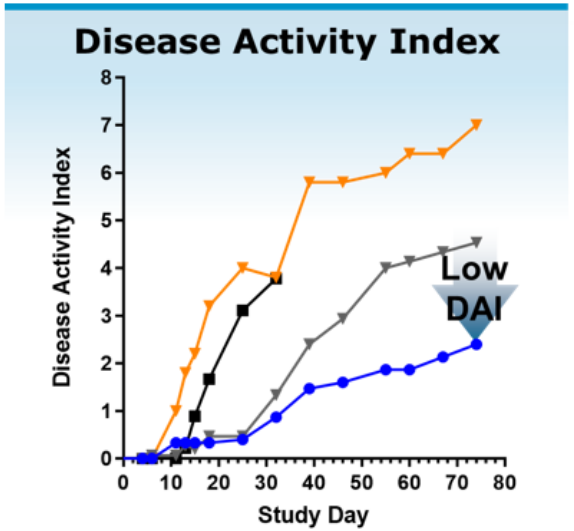
	ANB032 IgG4	Ref1 Mutated IgG4	Ref2 Mutated IgG4
Binding epitope is HVEM sparing	✓	✓	✗
FcR engagement	✓	✗	✗

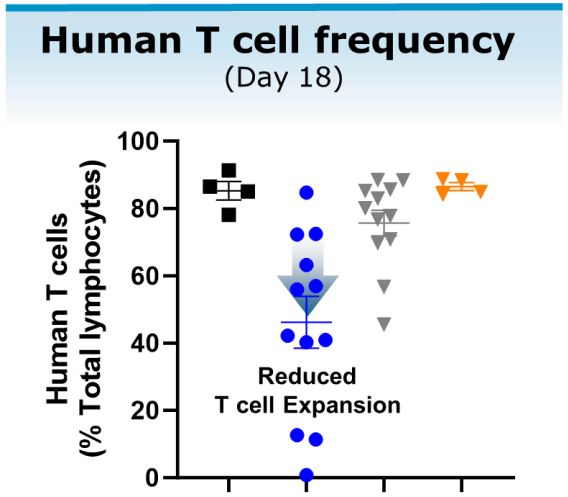
In vivo ANB032 Treatment Resulted in:

- Prolonged survival
- Maintenance of body weight
- Reduced Disease Activity Index
- Reduced human T cell expansion
- Reduced serum inflammatory cytokines
  - IFNγ
  - TNFα
  - GM-SF



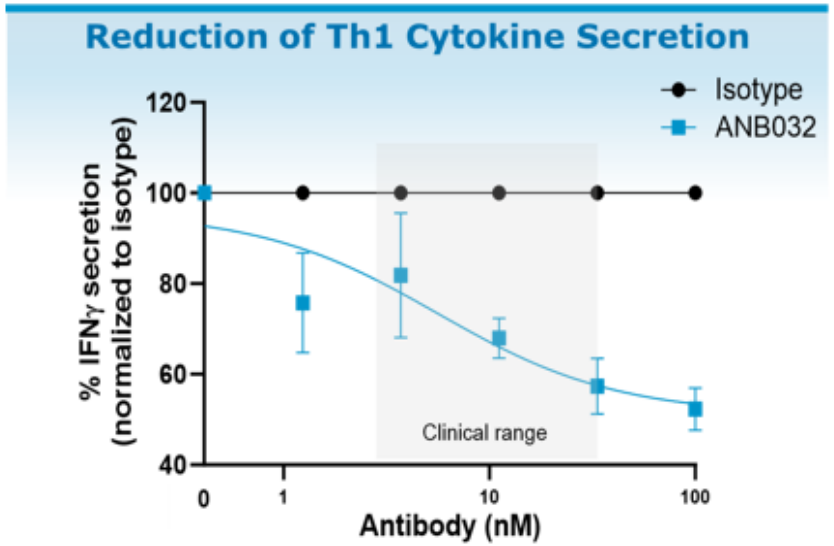


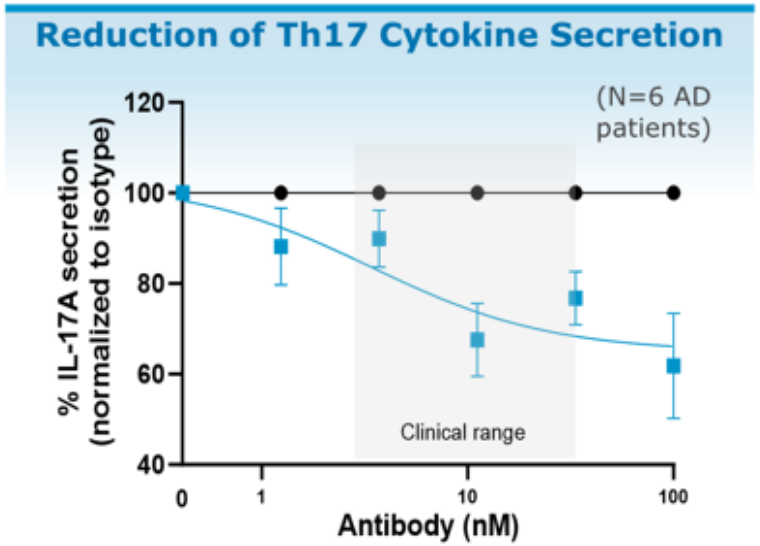


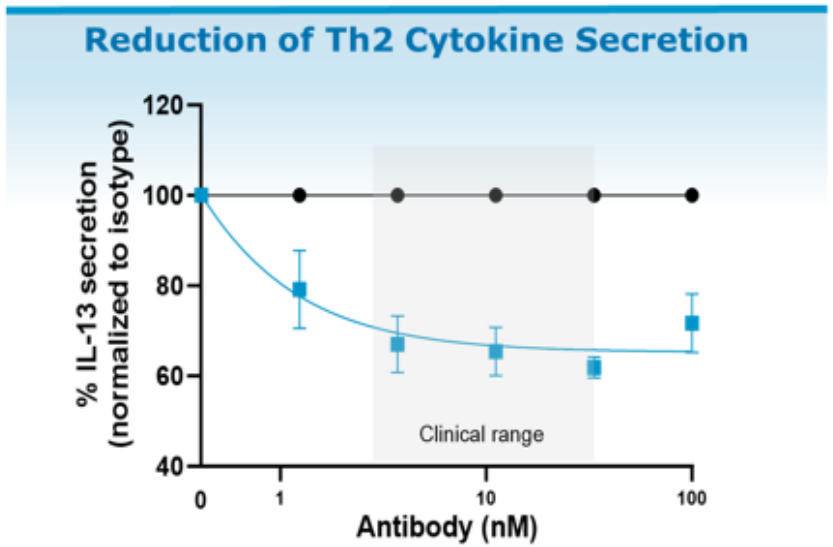


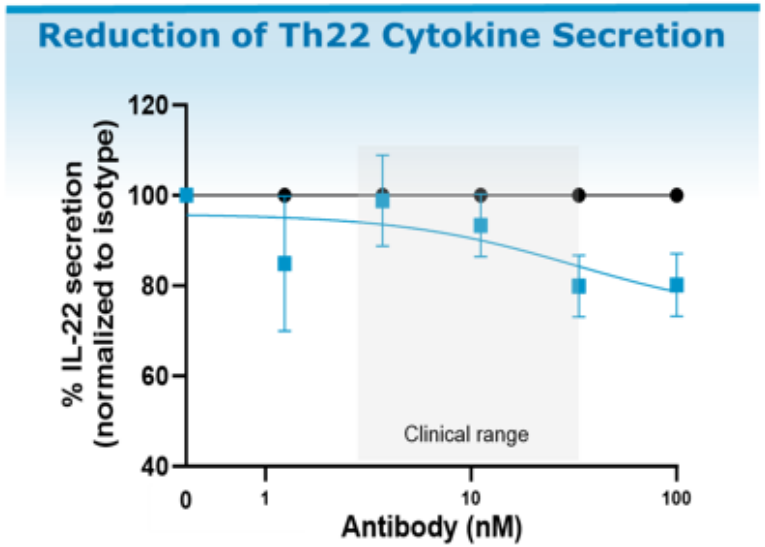
Hare et al. Presented at the AAI Conference US, Chicago, May 3-7, 2024

ANB032 Reduced Th1, Th2, Th17, and Th22 Cytokine Secretion in Atopic Dermatitis (AD) Patient-Derived PBMCs In Vitro









Conclusion

- BTLA agonism by ANB032 targets key cell types involved in the pathogenesis of atopic dermatitis
- Preclinical in-vitro and in-vivo data support clinical development
- ANB032 is being evaluated in an ongoing Phase 2 study in moderate-to-severe AD (NCT05935085)

Hare et al. Presented at the AAI Conference US, Chicago, May 3-7, 2024