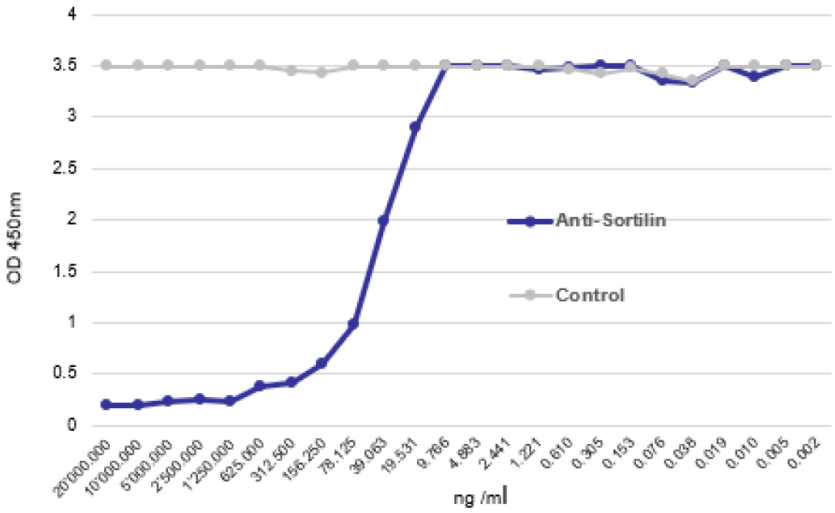
Application Note

Introduction

Latozinemab is an antibody developed by Alector and Abbvie. Its clone name is AL001. It is used for the treatment of frontotemporal dementia. This antibody targets Sortilin, a type 1 membrane glycoprotein expressed in the central nervous system. Sort1 controls progranulin endocytosis and is indirectly involved in lysosomal degradation of progranulin. Therefore, the neutralization and blocking of Sortilin up-regulates extracellular progranulin. This study was to set up to control the binding activity of ProteoGenix biosimilar pf Latozinemab (catalog number **PX-TA1676**).

Results



Binding of Progranulin (human) (rec.) (untagged) (#AG-40A-0188Y, AdipoGen Life Sciences) to Sortilin (human) (rec.) (His) (#AG-40B-0229, AdipoGen Life Sciences) is inhibited by the antibody Sortilin (human), mAb (rec.) (blocking) (Latozinemab Biosimilar).

Method

Progranulin (human) (rec.) (untagged) (#AG-40A-0188Y, AdipoGen Life Sciences) is coated on an ELISA plate at 1 µg/ml. Sortilin (human), mAb (rec.) (blocking) (Latozinemab Biosimilar) or an unrelated mAb (Control) is added (starting at 20 µg/ml with a twofold serial dilution) together with 250 ng/ml of Sortilin (rec.) (His) (#AG-40B-0229, AdipoGen Life Sciences) for 1 hour. The binding is detected using an anti-His (HRP) incubated for 30 minutes followed by the addition of the substrate TMB. The decreasing ODs observed in the Y axis represent the binding between Progranulin and Sortilin that is inhibited in a dose-dependent manner by Sortilin (human), mAb (rec.) (blocking) (Latozinemab Biosimilar). This inhibition is not observed with the control antibody. Courtesy of AdipoGen Life Sciences.

Conclusion

The binding affinity of ProteoGenix Latozinemab Biosimilar, an anti-Sort1 monoclonal antibody, was confirmed by AdipoGen Life Sciences. They set up an HRP-based Competitive ELISA. ProteoGenix Latozinemab Biosimilar showed a clear decrease in the binding affinity compared to the unrelated mAb.

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