

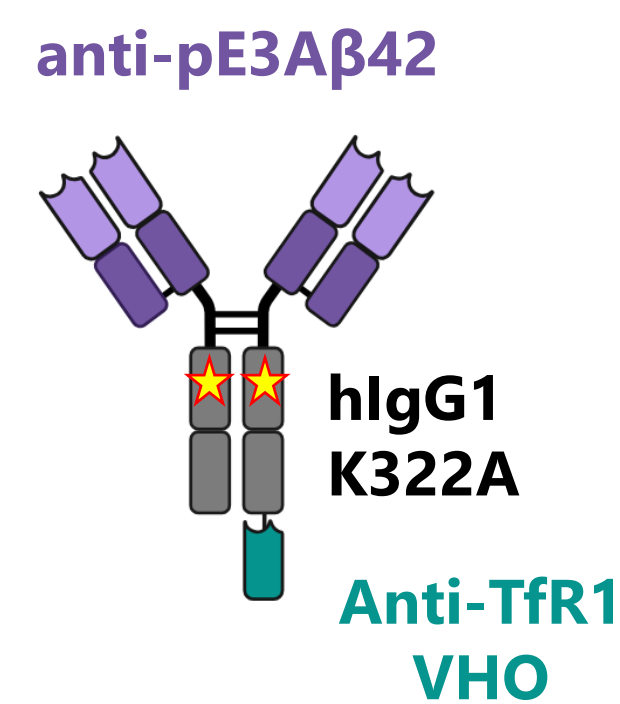
Targeted Delivery of A Novel Anti-pE3-42 Amyloid- β Antibody via Transferrin Receptor 1 Shuttle (PSB229) for Alzheimer's Disease

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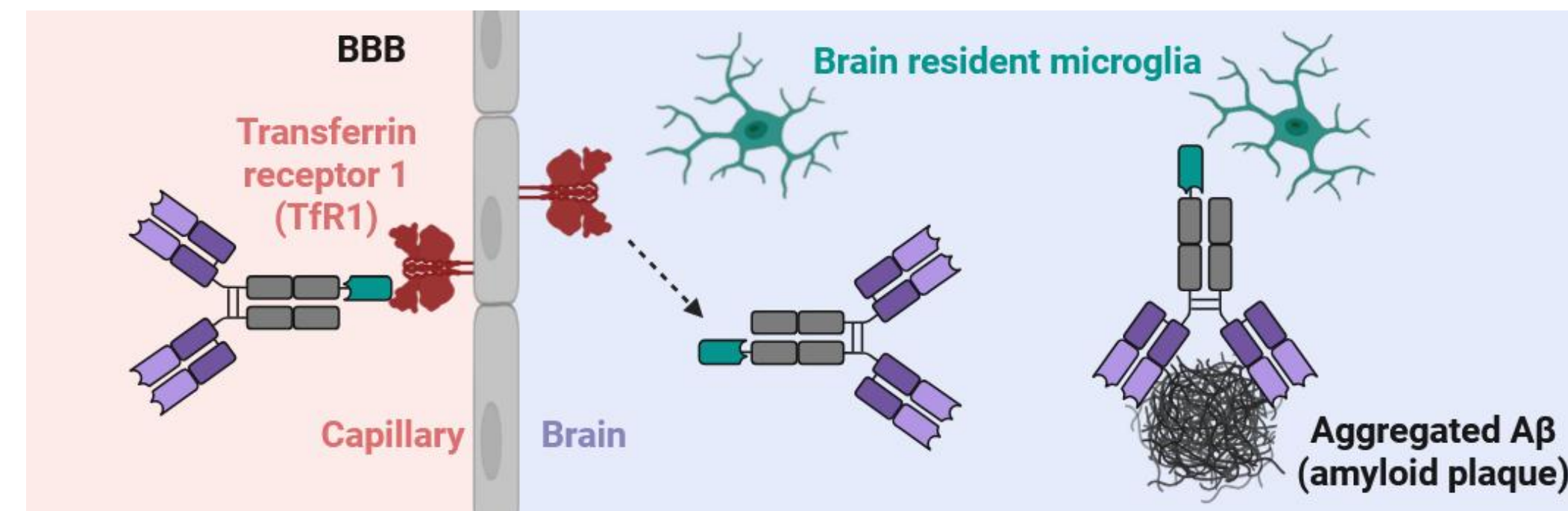
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PSB229: A TfR1 Brain-Shuttled Anti-pE3-A β Antibody Designed for Subcutaneous Treatment of Early Alzheimer's Disease



PSB229 is a brain-shuttled anti-pE3-A β antibody optimized for subcutaneous delivery, with enhanced brain exposure, rapid plaque reduction, and improved translational potential compared with conventional anti-amyloid approaches.



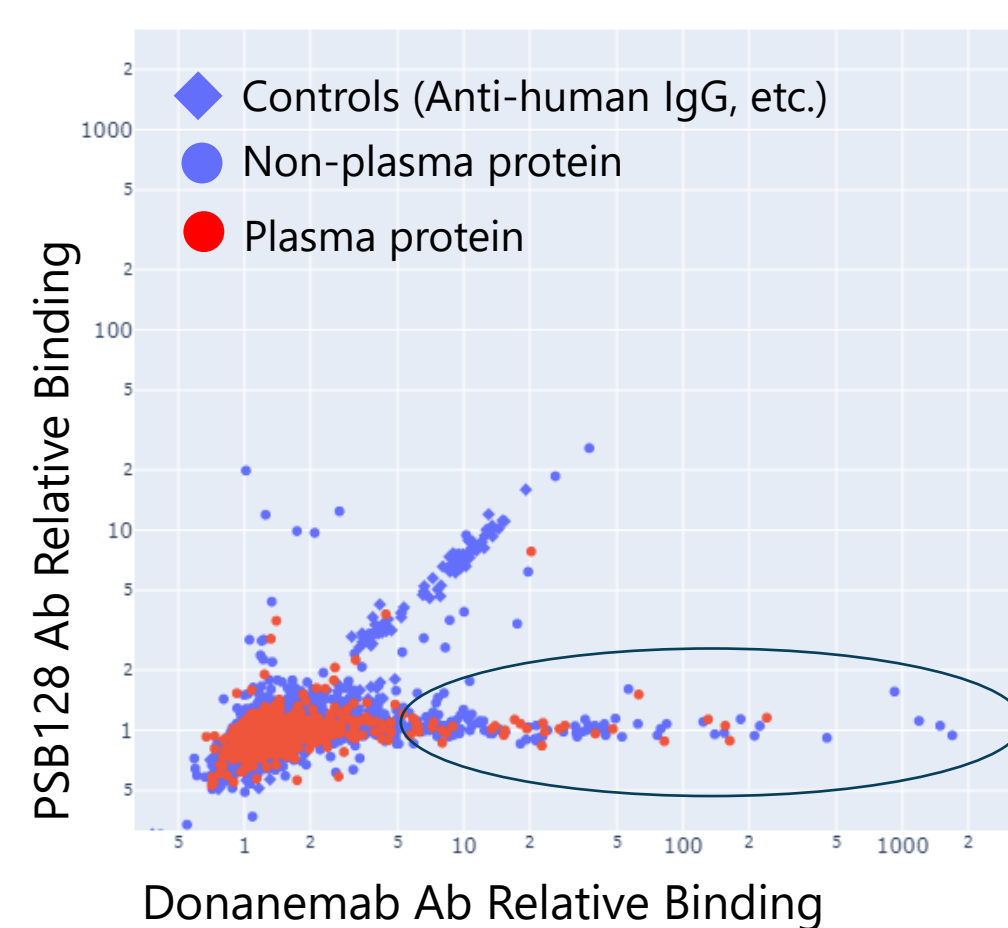
Brain-shuttled: TfR1-targeted delivery increases CNS exposure

Subcutaneous-ready: cynomolgus PK supports s.c. administration

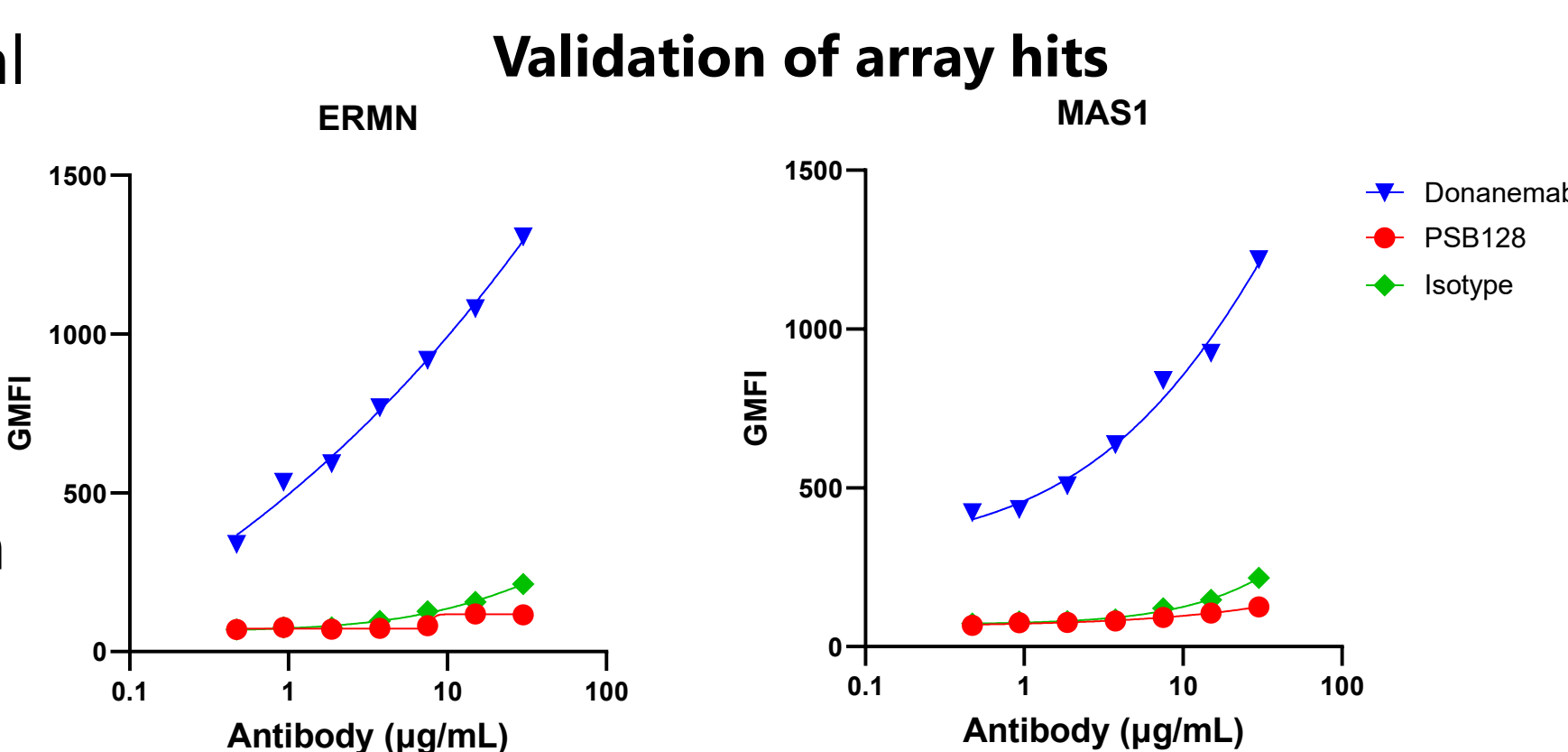
Rapid activity: plaque reduction observed within 1 month in FAD4T mice

Reduced Non-Specific Binding vs Approved Anti-Amyloid Antibodies

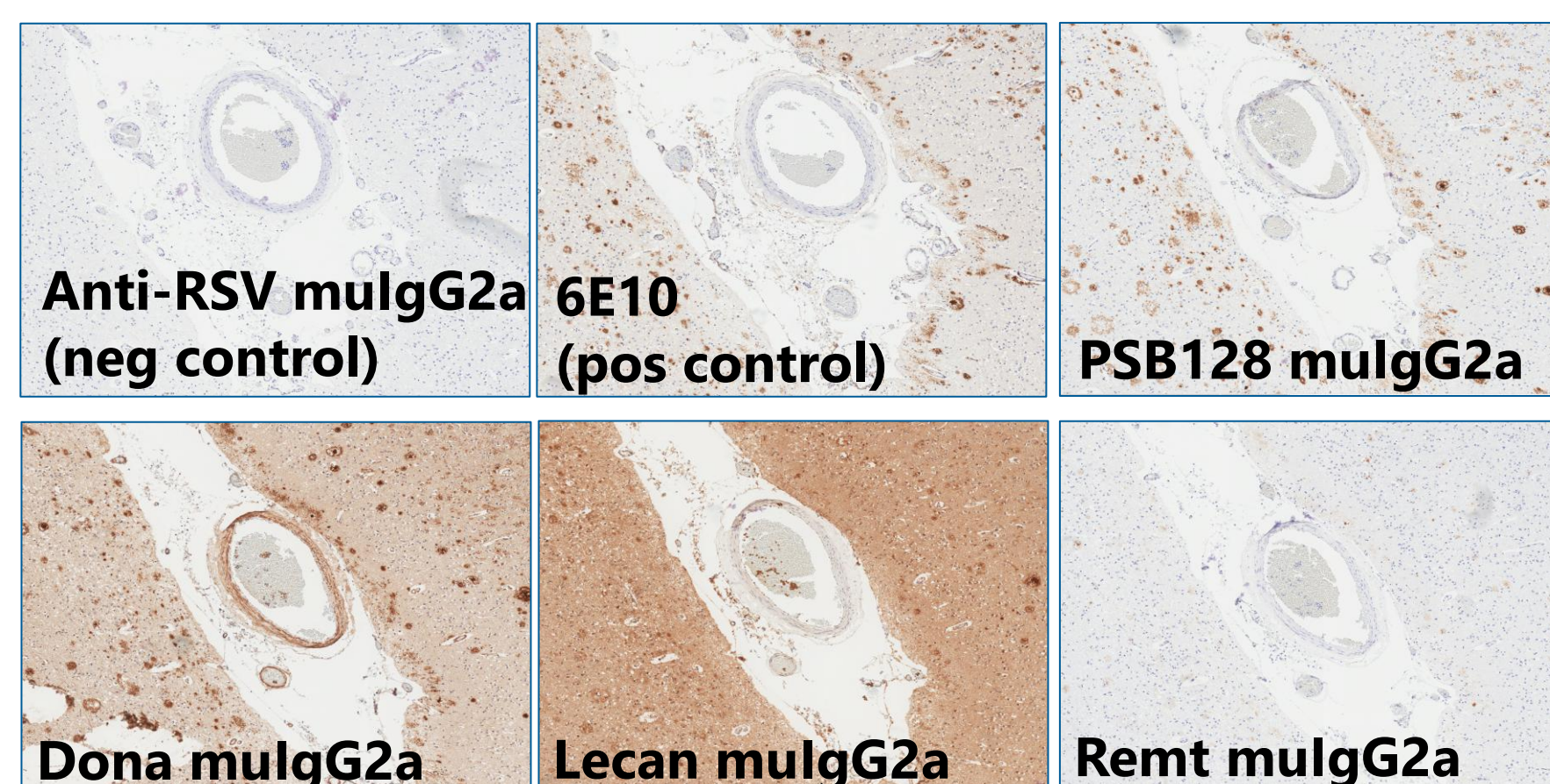
Off-target binding assessed using a 21,000-human-protein array



PSB128, the parental anti-pE3-A β antibody, showed minimal off-target binding in protein array and IHC staining of AD brain compared with Donanemab.

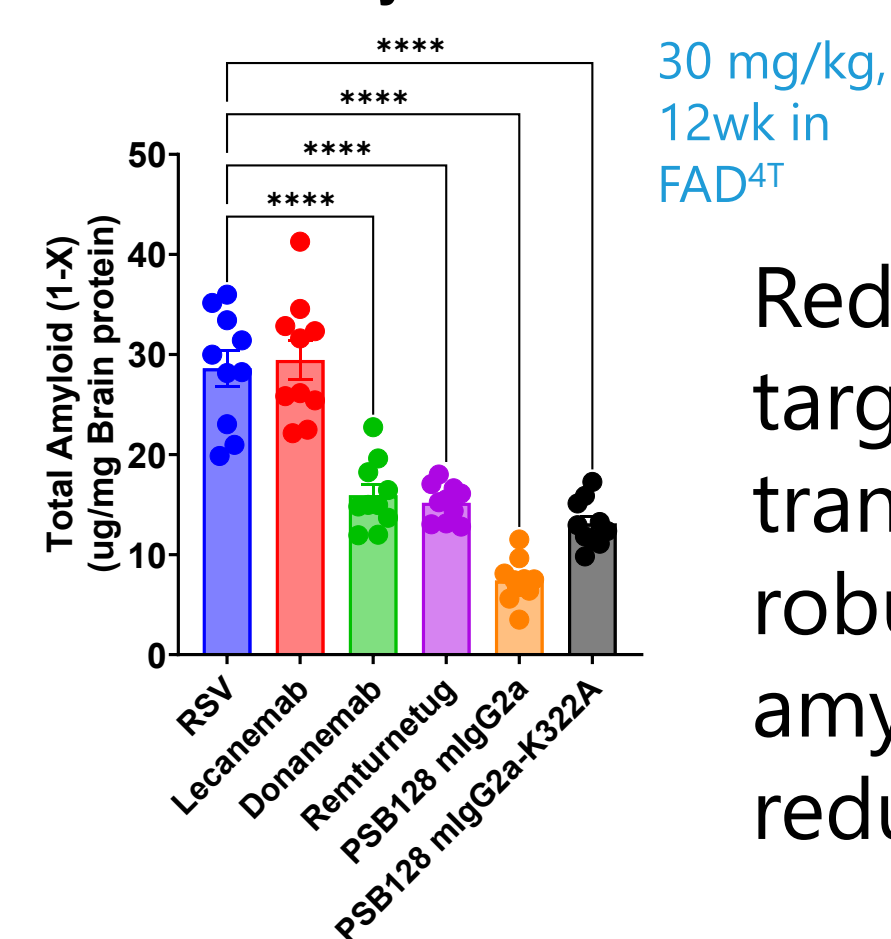


Elimination of non-specific binding by IHC and translation to efficacy



IHC example of brain tissue from postmortem AD patient [Brown color = positive staining]

Insoluble Amyloid Reduction

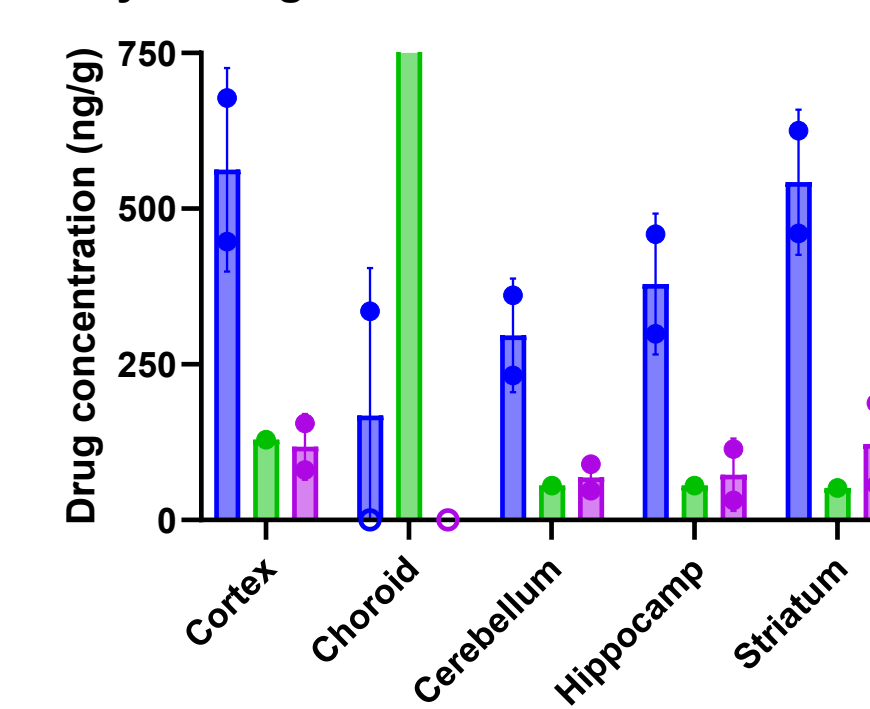


Reduced off-target binding translated to robust in vivo amyloid plaque reduction.

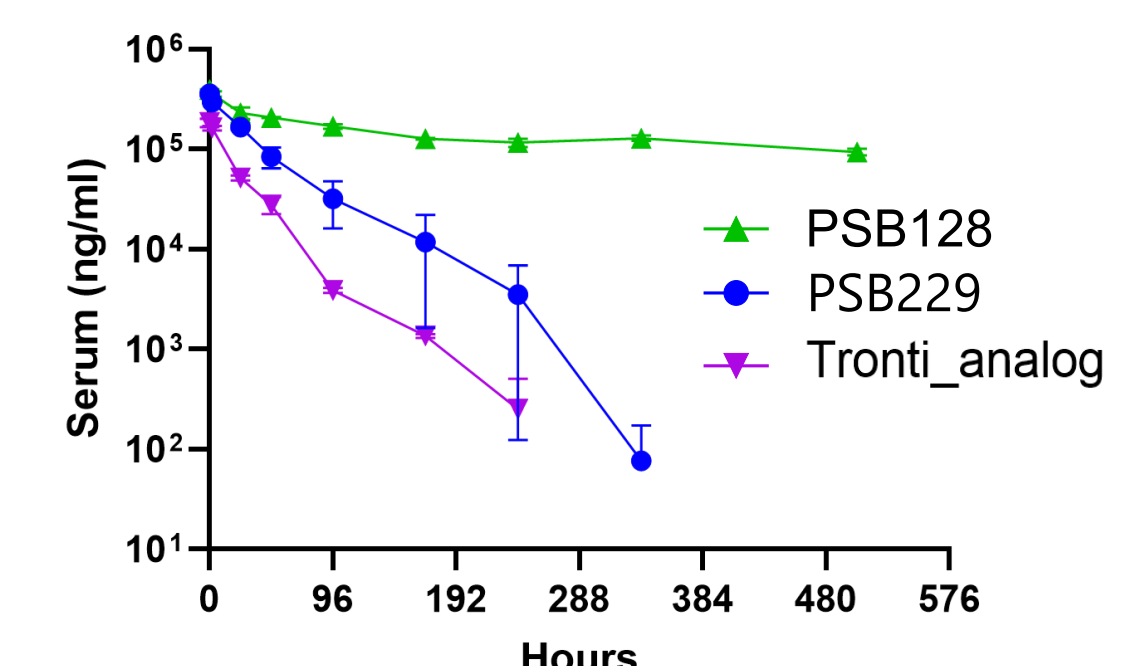
Brain Penetration and Serum PK in NHP

N = 2,
Equimolar
20 mg/kg IV

Antibody Concentration (minus tracer) in Cynomolgus Brain 24h Post-Administration

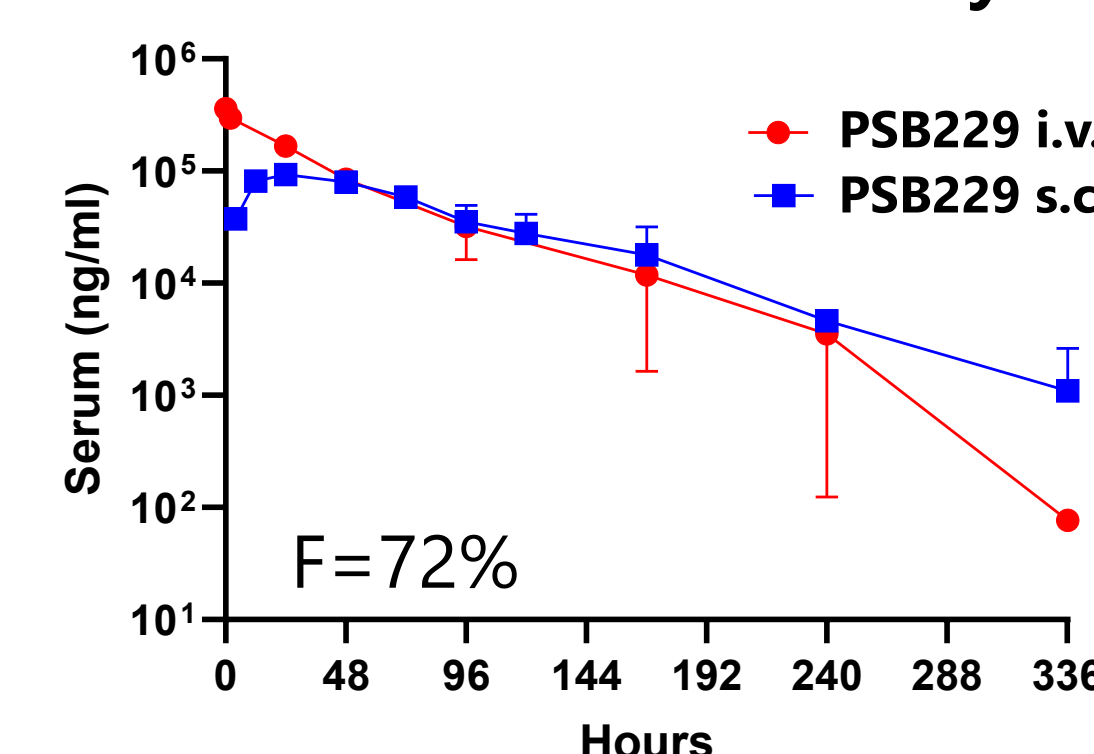


Serum PK

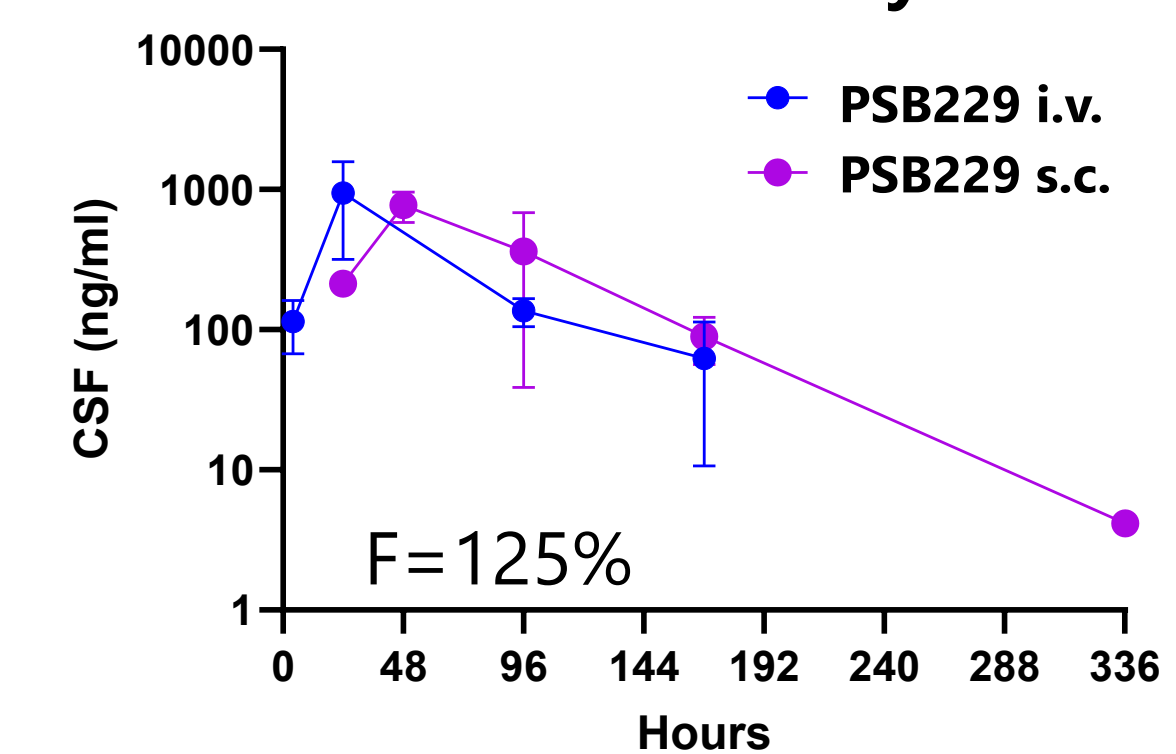


PK in monkey	TfR1 KD (nM)	T _{1/2} (h)	Cortex @24h (ng/g)	CSF @24h (ng/ml)	Serum _{24h} 2 nd /1 st dose	Serum _{24h} 2 nd dose
PSB229	268	42	563	502	0.35	58800
Trontinamab_analog	60	34.3	118	184	0.092	4800

Serum Bioavailability

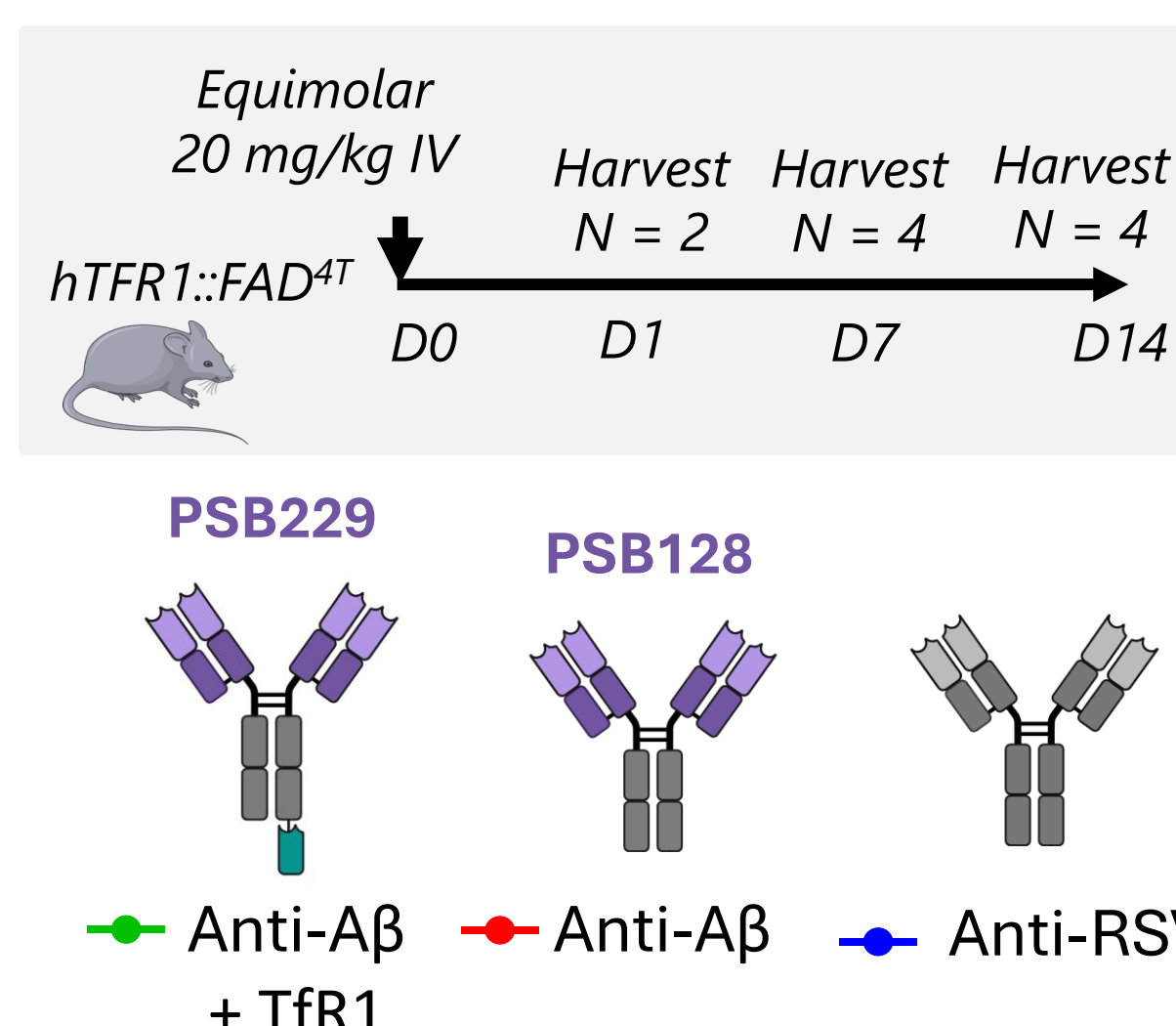


CSF Bioavailability

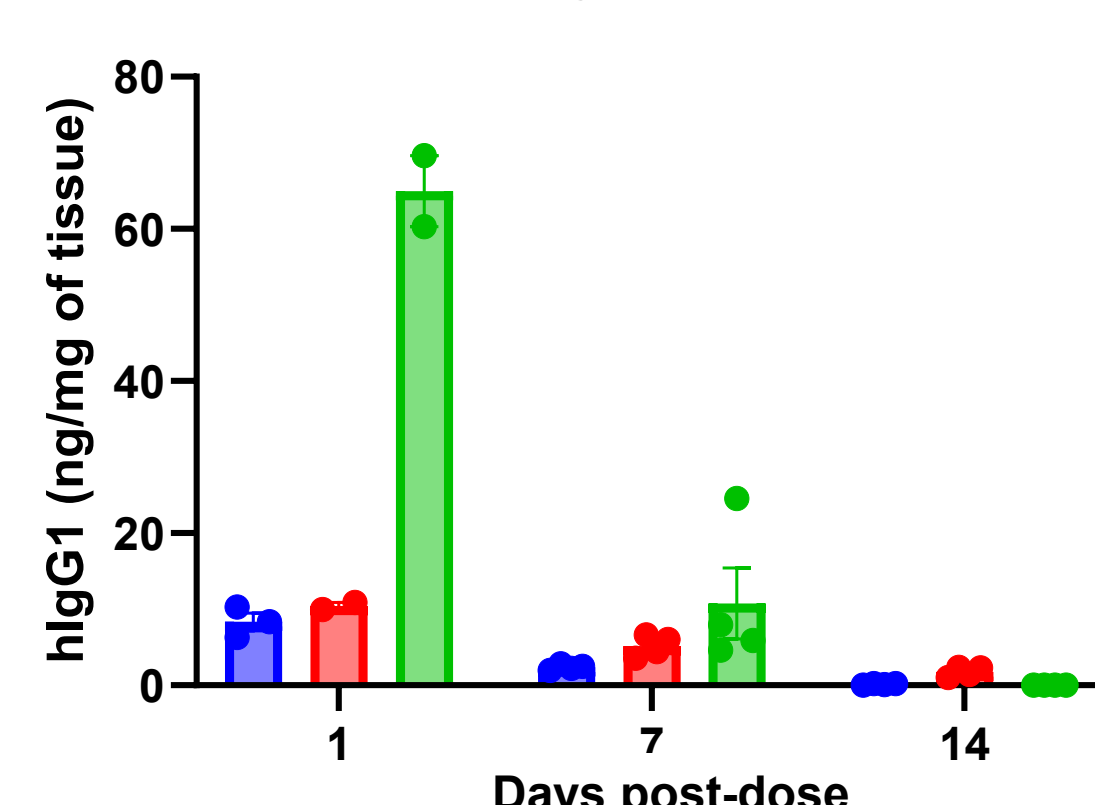


Subcutaneous PSB229 achieved sustained serum and CSF exposure in cynomolgus monkey.

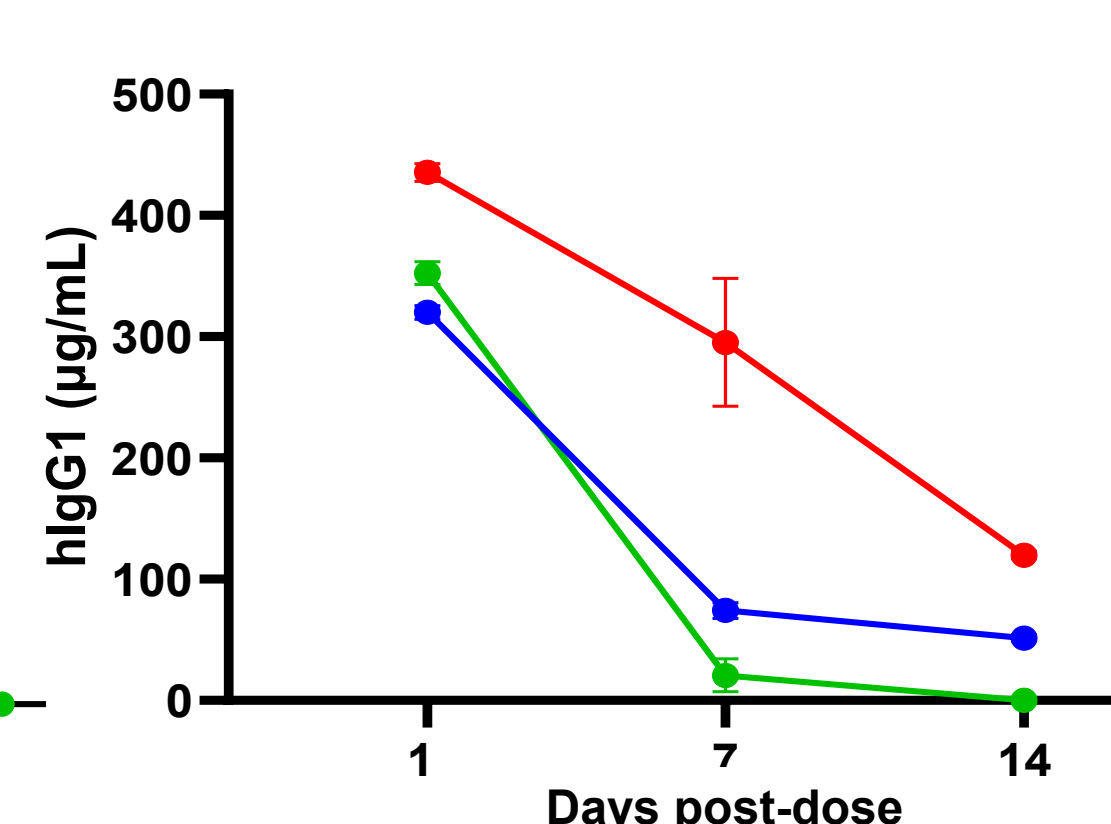
Demonstrated in vivo efficacy for PSB229 in FAD4T::hTfR1 mice



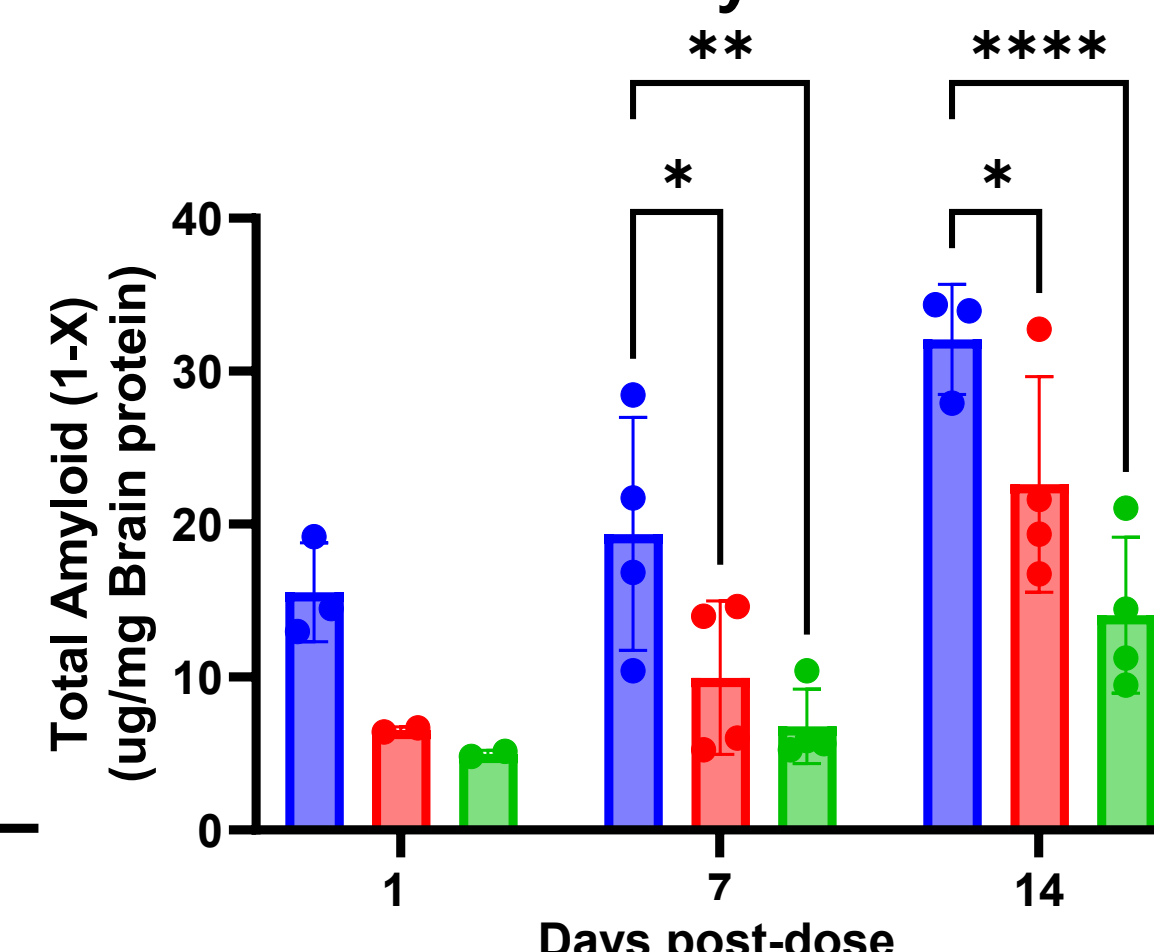
Brain PK



Plasma PK



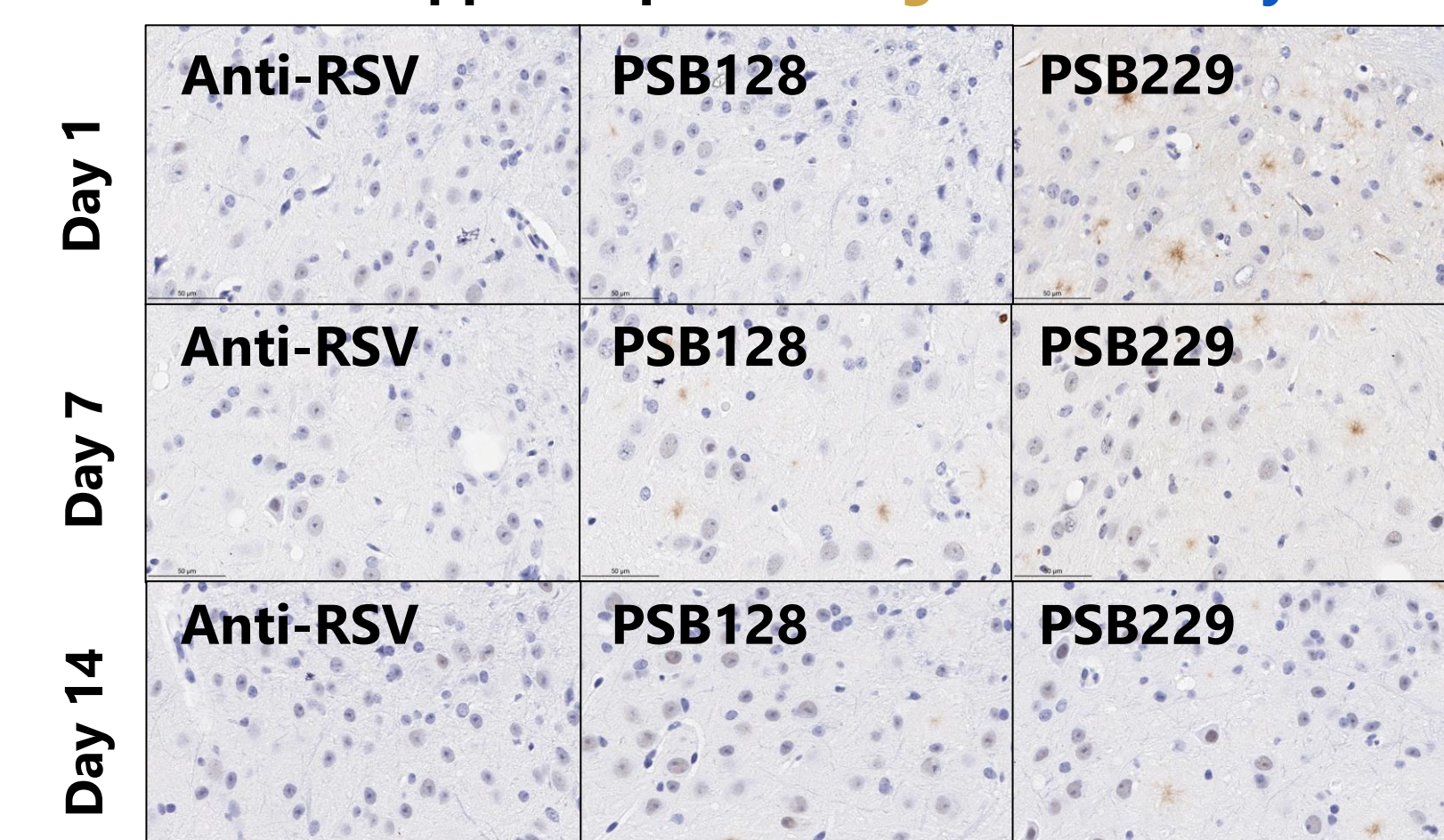
Insoluble Amyloid Beta



- 6X higher antibody concentration in the brain translates to superior clearance of insoluble amyloid plaques in 6-month-old hTfR1::FAD4T mice
- Target engagement can be detected at 24h post dosing in hTfR1::FAD4T mice brains by IHC

PSB229 produced ~6-fold higher brain exposure than PSB128 and reduced insoluble A β plaques after repeat dosing.

Hippocampus hlgG1 Hematoxylin



PSB229 is a differentiated brain-shuttled anti-pE3-A β therapeutic candidate designed for subcutaneous treatment of early Alzheimer's disease, featuring:

- high target specificity and minimal off-target binding
- robust brain uptake in hTfR1 mice and cynomolgus monkey
- rapid plaque reduction in FAD4T mice

Conclusion & Acknowledgement

Partnering Opportunity: Sound Biologics is seeking strategic clinical development and commercialization partners to advance PSB229, additional neurology programs, and MabPair portfolio assets.

We would like to thank all members of Sound Biologics and our colleagues at Qilu Pharma for their support and contribution.