

Biotin Conjugated Anti-Brain-derived tau/BD-tau Antibody [PSH16-47] - Detector

HA723849B



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det), ELISA
Clone number:	PSH16-47

Description: Levels were significantly higher in patients with biomarker-confirmed AD than in patients with non-AD dementia and unaffected controls, including in a cohort with postmortem confirmed diagnoses and in a memory clinic cohort with high disease heterogeneity. In this multicenter study, we examined the association of blood BD-tau with longitudinal cognitive changes and AD-characteristic brain atrophy rates along preclinical, MCI, and dementia stages of AD using four independent cohorts. We further assessed whether BD-tau concentrations increase with the co-occurrence of A+ and N+ abnormalities across the AD disease continuum and whether such A/N classification can be achieved using blood-based biomarkers to identify individuals at risk for cognitive decline and atrophy in the short term. In addition, we assessed the impact of genetic risk, comorbidities, and demographic factors, including ethnic self-identification, on plasma BD-tau concentrations and their clinical performance.

Conjugate:	Biotin-conjugated
Immunogen:	Synthetic peptide within Human Tau aa 5-24 (P10636-8).
Positive control:	Human Tau/Tau441, C-His (isoform 2N4R) Protein (HA210937).
Subcellular location:	Cell membrane. Cytoplasm. Secreted.
Database links:	SwissProt: P10636-8 Human

Recommended Dilutions:

ELISA(Det)	Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH16-46] to Brain-derived tau/BD-tau antibody (Capture) (HA723847) and Recombinant Human Tau/Tau441 protein (HA210937) as the standard. The reference range value is 0.156-10 ng/mL.
ELISA	Use at an assay dependent concentration.

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.05% Proclean 300.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein A affinity purified.

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Technical:0086-571-89986345

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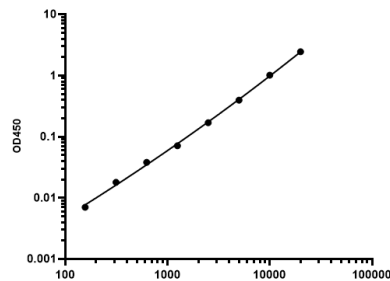
Images

Fig1: Sandwich ELISA analysis of Human Brain-derived tau/BD-tau matched pair antibodies

Capture: HA723847, Brain-derived tau/BD-tau Rabbit mAb [PSH16-46]

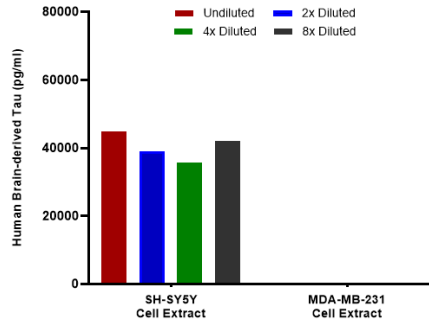
Detector: HA723848, Brain-derived tau/BD-tau Rabbit mAb [PSH10-47]

Standard curve of Human Brain-derived Tau matched pair antibodies



Elisa assay was performed by coating wells of a 96-well plate with 100 μ l per well of capture antibody (HA723847) diluted in carbonate/bicarbonate buffer, at a concentration of 5ug/ml overnight at 4°C. Wells of the plate were washed, blocked with 150 μ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Brain-derived tau/BD-tau protein (HA210937) starting from 10000 pg/ml to 0 pg/ml and detect antibody (HA723848, Biotin, 0.2 μ g/ml) for 1 hour at 30°C with shaking. Then the plate was washed and incubated with 100 μ l per well of SA-HRP for 0.5 hour at 30°C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

Fig2: Interpolated concentrations of native Brain-derived Tau in SH-SY5Y and MDA-MB-231 cell extract samples based on a 1000 μ g/ml extract load.

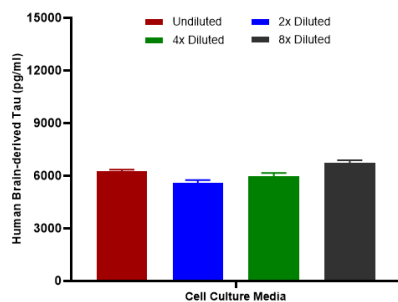


Capture: HA723847, Brain-derived tau/BD-tau Rabbit mAb [PSH16-46]

Detector: HA723848, Brain-derived tau/BD-tau Rabbit mAb [PSH10-47]

Interpolated concentration of native Brain-derived Tau was measured in duplicate at different sample concentrations and interpolated from the Brain-derived Tau standard curves. The mean Brain-derived Tau concentration was determined to be 40,370 pg/mL in SH-SY5Y cell extract. There was no detectable signal in MDA-MB-231 cell extract.

Fig3: Interpolated concentrations of spiked Brain-derived Tau in cell culture media samples.



Capture: HA723847, Brain-derived tau/BD-tau Rabbit mAb [PSH16-46]

Detector: HA723848, Brain-derived tau/BD-tau Rabbit mAb [PSH10-47]

The concentrations of Brain-derived Tau were measured in duplicates, interpolated from the Brain-derived Tau standard

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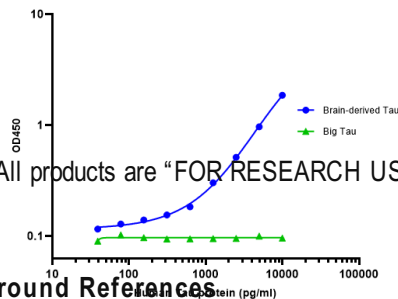
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HA723849E

Standard curve of Human Brain-derived Tau matched pair antibodies



Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Fig4: Coating Ab: HA723847, 5ug/ml

Co-Incubation: 1:2 serially diluted human Brain-derived Tau protein and Big Tau from HuaBio starting from a concentration of

10,000 pg/ml and Detect Ab: HA723848, Biotin, 0.2 μg/ml (30°C, 120rpm, 60min).

SA-HRP: 1:20,000 (50ng/ml) (30°C, 120rpm, 30min).

Background References

1. Gonzalez-Ortiz, F., Kirsebom, BE., Contador, J. et al. Plasma brain-derived tau is an amyloid-associated neurodegeneration biomarker in Alzheimer's disease. *Nat Commun* 15, 2908 (2024). <https://doi.org/10.1038/s41467-024-47286-5>
2. Gonzalez-Ortiz F, Turton M, Kac PR, Smirnov D, Premi E, Ghidoni R, Benussi L, Cantoni V, Saraceno C, Rivolta J, Ashton NJ, Borroni B, Galasko D, Harrison P, Zetterberg H, Blennow K, Karikari TK. Brain-derived tau: a novel blood-based biomarker for Alzheimer's disease-type neurodegeneration. *Brain*. 2023 Mar 1;146(3):1152-1165. doi: 10.1093/brain/awac407

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