Aeonian Biotech

Your choice for selective antibodies

Reccombinant Version of Classic Clone

Cat nr AE00322 **Product Datasheet**

Mouse Recombinant Antibody, r6E10 to:

Abeta, Amyloid beta

Abeta; Abeta40; Abeta42; Amyloid beta; Amyloid β; BetaA4 peptide; beta/A4 amyloid protein; Aβ peptide; βA4; A4

Cellular localization	Amyloid (senile) plaques in Alzheimer brain
Official Symbol (Gene)	APP
GeneID	351
SwissProt	P05067
Confirmed Applications	IHC, sELISA
Positive controls	EDTA plasma, CSF, DLB brain, transgenic mouse
Aeonian Rating©	100
Purification	By Protein A from bioreactor concentrate
Formulation ☐ ☐	1 mg IgG/ml in PBS with 0.02% Proclin 300
Amount	☐ 200ug ☐ 1000ug
Isotype	Mouse IgG1, kappa, recombinant version of clone 6E10
Confirmed species reactivity	Human
Immunogen	Synthetic Abeta aa1-16
Epitope	aa4-10 (Hatami et al)
Storage instructions	Avoid repeated freeze/thaw cycles. For long term storage, keep small aliquots at -20C or -80C and keep one aliquot at 4C for daily experimentations. Azide will preserve antibody at 4C for 6-12 months, when kept away from direct sun light.
Expiration	Integrity warranted for 24 months after purchase when handled and stored according to instructions, see below.
Warranty	This product is only warranted for the specifications as described in this product sheet and only when the product is handled and stored according to instructions. User should validate this antibody in the application and tissue/cell type as required, after confirmation of integrity upon receipt is obtained by reproducing the performance as described below. Should such confirmation not be attempted, any warranty is void. In case of non-conformance, user needs to contact us immediately for replacement or refund.
Liability	This product is for in vitro research use only. Any other applications, such as diagnostics or therapeutics, or in vivo experiments, and the validation of this product therein, are solely at the responsibility of the buyer/user.
Product performance	see next pages

Product data:

Enzyme-Linked ImmunoSorbent Assay, sandwich type (sELISA):
The original clone 6E10 was successfully used as a capture antibody and as a reporter antibody (in both cases paired with another antibody) for CSF analysis in sandwich ELISA.
Pirttilä T, Kim KS, Mehta PD, Frey H, Wisniewski HM. Soluble amyloid beta-protein in the cerebrospinal fluid from patients with Alzheimer's disease, vascular dementia and controls. J Neurol Sci. 1994 Dec 1;127(1):90-5. doi: 10.1016/0022-510x(94)90140-6. PMID: 7699397.

The original clone 6E10 was successfully used as a reporter antibody for EDTA plasma analysis in sandwich ELISA.
Thijssen EH, Verberk IMW, Vanbrabant J, Koelewijn A, Heijst H, Scheltens P, van der Flier W, Vanderstichele H, Stoops E, Teunissen CE. Highly specific and ultrasensitive plasma test detects Abeta(1-42) and Abeta(1-40) in Alzheimer's disease. Sci Rep. 2021 May 6;11(1):9736. doi: 10.1038/s41598-021-89004-x. PMID: 33958661.

ImmunoHistoChemistry (IHC):
The original clone 6E10 was successfully used to detect Abeta in fresh-frozen sections of human DLB brains.
Miranda-Azpiazu P, Svedberg M, Higuchi M, Ono M, Jia Z, Sunnemark D, Elmore CS, Schou M, Varrone A. Identification and in vitro characterization of C05-01, a PBB3 derivative with improved affinity for alpha-synuclein. Brain Res. 2020 Dec 15;1749:147131. doi: 10.1016/j.brainres.2020.147131. PMID:
The original clone 6E10 was successfully used to detect human Abeta in transgenic mouse brains and retina.
Barton SM, To E, Rogers BP, Whitmore C, Uppal M, Matsubara JA, Pham W. Inhalable Thioflavin S for the Detection of Amyloid Beta Deposits in the Retina. Molecules. 2021 Feb 5;26(4):835. doi: 10.3390/molecules26040835. PMID: 33562625.

Epitope assessment:
Hatami A, Albay R 3rd, Monjazeb S, Milton S, Glabe C. Monoclonal antibodies against Aβ42 fibrils distinguish multiple aggregation state polymorphisms in vitro and in Alzheimer disease brain. J Biol Chem. 2014 Nov 14;289(46):32131-32143. doi: 10.1074/jbc.M114.594846. Epub 2014 Oct 3. PMID: 25281743.
Baghallab I, Reyes-Ruiz JM, Abulnaja K, Huwait E, Glabe C. Epitomic Characterization of the Specificity of the Anti-Amyloid Aβ Monoclonal Antibodies 6E10 and 4G8. J Alzheimers Dis. 2018;66(3):1235-1244. doi: 10.3233/JAD-180582. PMID: 30412489.

6E10-specific most recent literature:
García-González L, Paumier JM, Louis L, Pilat D, Bernard A, Stephan D, Jullien N, Checler F, Nivet E, Khrestchatisky M, Baranger K, Rivera S. MT5-MMP controls APP and β-CTF/C99 metabolism through proteolytic-dependent and -independent mechanisms relevant for Alzheimer's disease. FASEB J. 2021 Jul;35(7):e21727. doi: 10.1096/fj.202100593R. PMID: 34117802.

Long Z, Chen J, Zhao Y, Zhou W, Yao Q, Wang Y, He G. Dynamic changes of autophagic flux induced by Abeta in the brain of postmortem Alzheimer's disease patients, animal models and cell models. Aging (Albany NY). 2020 Jun 13;12(11):10912-10930. doi: 10.18632/aging.103305. PMID: 32535554.

Braggin JE, Bucks SA, Course MM, Smith CL, Sopher B, Osnis L, Shuey KD, Domoto-Reilly K, Caso C,

Kinoshita C, Scherpelz KP, Cross C, Grabowski T, Nik SHM, Newman M, Garden GA, Leverenz JB, Tsuang D, Latimer C, Gonzalez-Cuyar LF, Keene CD, Morrison RS, Rhoads K, Wijsman EM, Dorschner MO, Lardelli M, Young JE, Valdmanis PN, Bird TD, Jayadev S. Alternative splicing in a presenilin 2 variant associated with Alzheimer disease. Ann Clin Transl Neurol. 2019 Mar 10;6(4):762-777. doi: 10.1002/acn3.755. PMID:

Agholme L, Clarin M, Gkanatsiou E, Kettunen P, Chebli J, Brinkmalm G, Blennow K, Bergström P, Portelius E, Zetterberg H. Low-dose γ-secretase inhibition increases secretion of Aβ peptides and intracellular oligomeric Aβ. Mol Cell Neurosci. 2017 Dec;85:211-219. doi: 10.1016/j.mcn.2017.10.009. PMID: 29104140.

Wagner LK, Gilling KE, Schormann E, Kloetzel PM, Heppner FL, Krüger E, Prokop S. Immunoproteasome deficiency alters microglial cytokine response and improves cognitive deficits in Alzheimer's disease-like APPPS1 mice. Acta Neuropathol Commun. 2017 Jun 24;5(1):52. doi: 10.1186/s40478-017-0453-5. PMID: 28646899.