INVIVO
BioTech Services GmbH
a BRUKER company

Anti-human prion protein mAb 14D11

Description:

The prion protein (PrP) is a widely expressed and evolutionary conserved glycoprotein found throughout the body. It occurs in two main conformations: the normal cellular isoform (PrPC) and the infectious disease-related isoform (PrPSc). PrPC is abundant on neuronal surfaces and supports functions such as myelin maintenance, neuroprotection, circadian regulation, ion and mitochondrial balance, and intercellular signaling. PrPSc, the pathogenic agent in prion disease, is a misfolded, aggregated variant of PrPC. Through self-propagating autocatalytic conversion, PrPSc amplifies within the central nervous system, leading to progressive accumulation and ultimately neuronal degeneration.

The clone 14D11 is a Monoclonal Mouse antibody against Human prion protein from human, sheep and cattle, PrPc (Uniprot: Q7KYZ).

The antibody is produced exclusively from hybridoma and purified through one-step purification with Protein-A affinity chromatography.

Product-ID:	**INV4000047**
Clone:	14D11
Immunogen:	Animals were immunized with recombinant human prion protein
Host:	Mouse
Clonality:	Monoclonal
Isotype:	IgG1k
Formulation:	Clear Liquid, PBS, pH 7.4
Concentration:	> 1.0 mg/ml
Purity:	> 95% by SDS-PAGE
Sizes available:	0.05 mg
Storage:	at - 20 °C (repeated thawing and freezing should be avoided)
Tested application(s):	ELISA, Western Blot, Immunhistochemistry

The product is for research use only and not for use in diagnostic or therapeutic procedures.

Literature:

[1] - Kovač V, Čurin Šerbec V. Prion Protein: The Molecule of Many Forms and Faces. Int J Mol Sci. 2022 Jan 22;23(3):1232. doi: 10.3390/ijms23031232. PMID: 35163156; PMCID: PMC8835406.

[2] - Sigurdson CJ, Bartz JC, Glatzel M. Cellular and Molecular Mechanisms of Prion Disease. Annu Rev Pathol. 2019 Jan 24;14:497-516. doi: 10.1146/annurev-pathmechdis-012418-013109. Epub 2018 Oct 24. PMID: 30355150; PMCID: PMC9071098.

References:

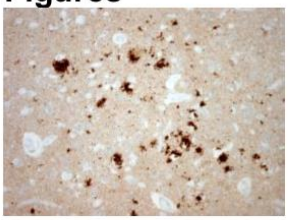
a. Laffont-Proust I, Hässig R, Haïk S, Simon S, Grassi J, Fonta C, Faucheux BA, Moya KL. Truncated PrP(c) in mammalian brain: interspecies variation and location in membrane rafts. Biol Chem. 2006 Mar;387(3):297-300. doi: 10.1515/BC.2006.039. PMID: 16542151.

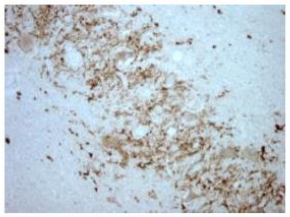
b. Hui Z, Minamiguchi K, Doi H, Kinoshita N, Kanouchi H, Oka T. Recombinant alkaline serine protease II degrades scrapie isoform of prion protein. In Vitro Cell Dev Biol Anim. 2004 Sep-Oct;40(8-9):293-6. doi: 10.1290/0406041.1. PMID: 15723565.

InVivo BioTech Services GmbH is certified to ISO 9001 and ISO 13485.

Anti-human prion protein mAb 14D11 — Supplementary Data

Figures





Immunohistochemical detection of plaque-like deposits in perivacuolar areas of cortical grey matter and deep nuclei [left] and fine synaptic accumulation in some nuclei such as the dentate nucleus of the cerebellum [right] in sections from a patient with proven classic form of CJD using 14D11 (1:3000).