

## Anti-Prion protein antibody, mouse monoclonal (7A1)

Catalog # 65-903 50 µg

Prion protein PrP is a membrane glycosylphosphatidylinositol (GPI) anchored glycoprotein highly expressed in neuron and glia cells as well as immune and reproductive cells. Mutations in the octapeptide repeat regions as well as elsewhere in this gene have been associated with neurodegenerative diseases such as Creutzfeldt Jakob disease, fatal familial insomnia, Gerstmann Straussler disease, Huntington disease like 1, and kuru. The infectious isoform of PrP<sup>C</sup>, known as PrP<sup>Sc</sup>, is able to convert normal PrP<sup>C</sup> proteins into the infectious isoform, which is insoluble amyloid aggregate, by changing their conformation (1). Mature PrP protein in human consists of 209 amino acids. Several topological forms exist; one cell surface form anchored via glycolipid and two transmembrane forms, which are responsible for appearance of multiple bands in SDS-PAGE (Figure).

### Applications

1) Western blot (~0.5 µg/ml) 2) ELISA Other applications have not been tested.

### Specification

Immunogen: Recombinant human PrP lacking GPI anchor expressed and purified from rabbit kidney cell line RK13.

Reactivity: Reacts with human Prion but not with mouse Prion. Other species have not been tested.

Antibody: Mouse monoclonal antibody, IgG. The hybridoma was established in the laboratory of Prof. N. Kitamoto at University of Hyogo.

Form: Purified IgG 1 mg/ml in PBS(-), 50% glycerol, filter-sterilized (azide-free)

Storage: Ship 4°C and store -20°C or long term storage -80°C

**Data Link** UniProtKB/Swiss-Prot [P04156](http://www.uniprot.org/entry/P04156)

**References** This antibody has been used in Ref.2

1. Sakudo A *et al* "Recent developments in prion disease research: diagnostic tools and in vitro cell culture models" *J Vet Med Sci* 69:329-337 (2007) Review PMID: [17485919](https://pubmed.ncbi.nlm.nih.gov/17485919/)
2. Sakudo A *et al* "GPI-anchorless human prion protein is secreted and glycosylated but lacks superoxide dismutase activity" *Int J Mol Med* 21: 217-222 (2008) PMID: [18204788](https://pubmed.ncbi.nlm.nih.gov/18204788/)
4. Grathwohl KU *et al* "Sensitive enzyme-linked immunosorbent assay for detection of PrP(Sc) in crude tissue extract from scrapie-affected mice" *J Virol Methods* 64: 205-216 (1997) PMID: [9079766](https://pubmed.ncbi.nlm.nih.gov/9079766/)

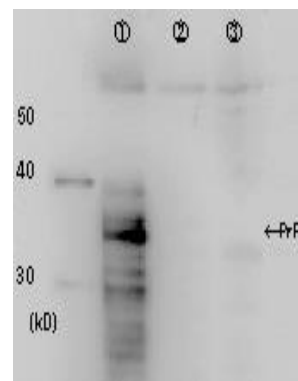


Figure Identification of Prion protein in crude cell extract by Western blot using the monoclonal antibody 2C5-5.

Lane 1: Extract of rabbit kidney cells RK13 over-expressing Prion protein  
Lane 2: Negative control; extract of the vector infected cells  
Lane 3: Negative control; extract of RK13 cells