

# Product Datasheet

## **beta Amyloid 42 Peptide** **NBP3-18318-1mg**

Unit Size: 10 x 100ug Vials

Store at -70C. Avoid freeze-thaw cycles.

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**NBP3-18318-1mg**

beta Amyloid 42 Peptide

**Product Information**

<b>Unit Size</b>	10 x 100ug Vials
<b>Concentration</b>	Please see the vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Store at -70C. Avoid freeze-thaw cycles.
<b>Preservative</b>	No Preservative
<b>Reconstitution Instructions</b>	See Reconstitution Instructions PDF for detailed protocol
<b>Purity</b>	>98%, by HPLC
<b>Buffer</b>	Dry powder.
<b>Target Molecular Weight</b>	4.5 kDa

**Product Description**

<b>Description</b>	A synthetic peptide treated with HFIP corresponding to human beta Amyloid 42.  <b>Amino Acid Sequence:</b> DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGGVIA
<b>Gene ID</b>	351
<b>Gene Symbol</b>	APP
<b>Species</b>	Human

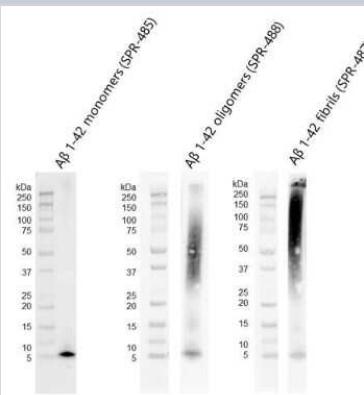
**Product Application Details**

<b>Applications</b>	Western Blot, Electron Microscopy, Immunomicroscopy, In vitro assay, In vivo assay
<b>Recommended Dilutions</b>	Western Blot, In vitro assay, Immunomicroscopy, Electron Microscopy, In vivo assay

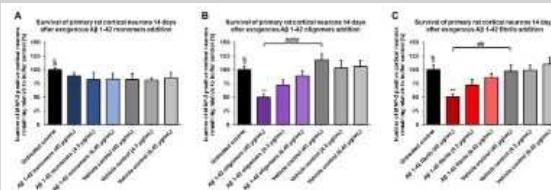
## Images

Western Blot: beta Amyloid 42 Peptide [NBP3-18318] - Western blot of amyloid beta 1-42 monomers (NBP3-18318, left), oligomers (middle) and fibrils (right) using anti-amyloid beta 6E10 antibody. Amyloid beta constructs at 160 pmol were run on 4-12% Bis-Tris SDS-PAGE, transferred to nitrocellulose in the presence of 0.02% v/v Tween-20, and blotted with 1:1000 mouse 6E10 primary antibody (Biolegend).

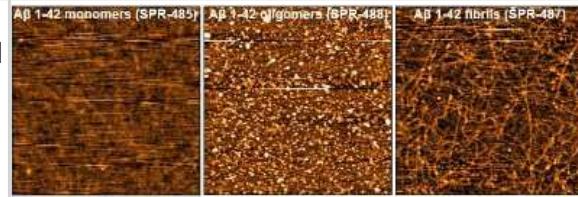
Oligomers observed under TEM/AFM show distinct dimer/trimer bands as well as a signal from ~37-75 kDa (middle). Fibrils observed under TEM/AFM show a signal greater than 100 kDa and a distinct signal in the stacking gel (right).



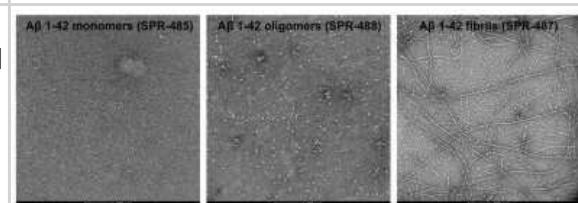
In vitro assay: beta Amyloid 42 Peptide [NBP3-18318] - Amyloid beta 1-42 oligomers and fibrils show a dose-dependent toxicity to primary rat cortical neurons, but not monomers (NBP3-18318). Survival of rat primary cortical neurons 14 days after treatment with different concentrations of (A) monomers, (B) oligomers or (C) fibrils quantified by MAP2 positive neurons and expressed as a percentage of control. Fibrils and respective vehicle controls were initially sonicated in a Bioruptor. Test conditions were run in the same plate as untreated control and vehicle controls, which consisted of buffer without amyloid beta 1-42 protein. Data expressed as mean +/- s.e.m. (n=6). A global analysis of the data was performed using a one-way ANOVA followed by Dunnett's test; \*\* p<0.01 stats vs control; ## p<0.01, ##### p<0.0001 stats vs vehicle control.



Immunomicroscopy: beta Amyloid 42 Peptide [NBP3-18318] - AFM of amyloid beta 1-42 monomers (NBP3-18318, left), oligomers (middle) and fibrils (right). Atomic force microscopy analysis of 1.0 mg/mL samples diluted to 0.1 mg/mL in dH2O, mounted on freshly cleaved mica, washed, dried and analyzed with tapping mode. Representative images are 2.5 x 2.5 m x-y with a z-range of 10 nm.



Electron Microscopy: beta Amyloid 42 Peptide [NBP3-18318] - TEM of amyloid beta 1-42 monomers (NBP3-18318, left), oligomers (middle) and fibrils (right). Negative stain transmission electron microscopy images acquired at 80 Kv on carbon coated 400 mesh copper grids using phosphotungstic acid and uranyl acetate stain. Scale bar = 100 nm.





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## Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Peptides and proteins are guaranteed for 3 months from date of receipt.

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