

# PRODUCT INFORMATION



## Amyloid- $\beta$ (1-8, A2V) Peptide

Item No. 10229

### Overview and Properties

**Synonyms:** A $\beta$  (1-8, A2V), A $\beta$  (1-8) mutant, Amyloid- $\beta$  (1-8) dominant negative  
**Peptide Sequence:** human  $\beta$ -amyloid amino acids 1-8 with valine at position two instead of alanine; DVEFRHDS  
**FW:** 1,004  
**Storage:** -20°C (as supplied); use reconstituted aliquots within 30 days if -20°C storage  
**Stability:**  $\geq$ 1 year  
**Supplied as:** 1 mg lyophilized peptide  
**Solubility:** 10 mg/ml with water or aqueous buffers

### Description

Amyloid- $\beta$  (1-8, A2V) is a truncated form of amyloid- $\beta$  (A $\beta$ ) that contains a valine to alanine substitution at position 2 of the A $\beta$  numbering convention (A $\beta$  A2V), which corresponds to position 673 of the amyloid precursor protein (APP) numbering convention (APP A673V).<sup>1</sup> An A $\beta$  (1-40) (A $\beta$ 40) A2V peptide increases the production of A $\beta$  and the rate and amount of amyloid fibril formation *in vitro*, effects that can be reduced by coinubation with wild-type A $\beta$ 40. A $\beta$ 40 and A $\beta$ 42 levels are increased in CHO cells expressing the A $\beta$  A2V mutation and in fibroblasts derived from patients with the A $\beta$  A2V mutation. As a homozygous mutation, A $\beta$  A2V is correlated with Alzheimer's disease with distinctive pathological features, but disease does not develop in patients with a heterozygous A $\beta$  A2V mutation.<sup>1,2</sup>

### References

1. Di Fede, G., Catania, M., Morbin, M., *et al.* A recessive mutation in the APP gene with dominant-negative effect on amyloidogenesis. *Science* **323**(5920), 1473-1477 (2009).
2. Giaccone, G., Morbin, M., Moda, F., *et al.* Neuropathology of the recessive A673V APP mutation: Alzheimer disease with distinctive features. *Acta Neuropathol.* **120**(6), 803-812 (2010).

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/07/2018

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM