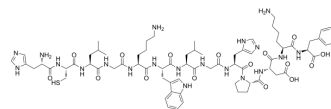


## PLP (139-151)

**Cat. No.:** HY-P0129  
**CAS No.:** 131334-43-5  
**Molecular Formula:** C<sub>72</sub>H<sub>104</sub>N<sub>20</sub>O<sub>16</sub>S  
**Molecular Weight:** 1537.79  
**Sequence:** His-Cys-Leu-Gly-Lys-Trp-Leu-Gly-His-Pro-Asp-Lys-Phe  
**Sequence Shortening:** HCLGKWLGHDPKF  
**Target:** Others  
**Pathway:** Others  
**Storage:** Sealed storage, away from moisture  
 Powder -80°C 2 years  
 -20°C 1 year



\* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 50 mg/mL (32.51 mM)  
 \* "≥" means soluble, but saturation unknown.

| Concentration             | Solvent | Mass      |           |           |
|---------------------------|---------|-----------|-----------|-----------|
|                           |         | 1 mg      | 5 mg      | 10 mg     |
| Preparing Stock Solutions | 1 mM    | 0.6503 mL | 3.2514 mL | 6.5028 mL |
|                           | 5 mM    | 0.1301 mL | 0.6503 mL | 1.3006 mL |
|                           | 10 mM   | 0.0650 mL | 0.3251 mL | 0.6503 mL |

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

1. Add each solvent one by one: PBS  
 Solubility: 50 mg/mL (32.51 mM); Clear solution; Need ultrasonic

### BIOLOGICAL ACTIVITY

#### Description

PLP (139-151) is amino acid residue 139 to 151 of myelin proteolipid protein (PLP) used to induce experimental autoimmune encephalomyelitis (EAE).

#### In Vitro

Severe clinical and histological EAE could be induced by adoptive transfer of the peptide-specific T cell line and 3 of 4 T cell clones. The T cell line/clones all responded strongly to PLP (139-151) in in vitro proliferative assays. Line SPL and all of the clones show strong proliferative response to the whole PLP molecule and to PLP (139-151)<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

PLP (139-151) can be used in animal modeling to construct autoimmune encephalomyelitis model.

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PLP (139-151) induces acute experimental allergic encephalomyelitis (EAE) in SJL/J mice. Beginning on Day 9, the mice treated with PLP (139-151) show signs of EAE and the disease progressed rapidly to paralysis. Central nervous system inflammation, edema, gliosis, and demyelination are found in all mice killed between Days 10 and 28<sup>[2]</sup>. Young male SJL mice immunized with a major encephalitogenic peptide of myelin, PLP 139-151, develop initial clinical and histological symptoms of EAE with a severity similar to age-matched females; however, unlike females, male mice does not relapse. Significant T cell proliferation to PLP 139-151, but not to other PLP and myelin basic protein (MBP) epitopes, is observed in both males and females during the initial episode, recovery, and first relapse of clinical disease<sup>[3]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

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- [1]. Kuchroo VK, et al. Induction of experimental allergic encephalomyelitis by myelin proteolipid-protein-specific T cell clones and synthetic peptides. *Pathobiology*. 1991;59(5):305-12.
- [2]. Sobel RA, et al. Acute experimental allergic encephalomyelitis in SJL/J mice induced by a synthetic peptide of myelin proteolipid protein. *J Neuropathol Exp Neurol*. 1990 Sep;49(5):468-79.
- [3]. Bebo BF Jr, et al. Male SJL mice do not relapse after induction of EAE with PLP 139-151. *J Neurosci Res*. 1996 Sep 15;45(6):680-9.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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