# LQVTDSGLYRCVIYHPP

**Cat. No.:** HY-P3400

**CAS No.:** 887255-16-5

**Molecular Formula:** $C_{89}H_{137}N_{23}O_{25}S$

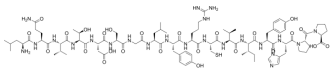
**Molecular Weight:** 1961.24

**Sequence Shortening:** LQVTDSGLYRCVIYHPP

**Target:** Others

**Pathway:** Others

**Storage:** Sealed storage, away from moisture and light, under nitrogen
Powder -80°C 2 years
-20°C 1 year
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 25 mg/mL (12.75 mM; Need ultrasonic)
$H_2O$ : 5 mg/mL (2.55 mM; ultrasonic and adjust pH to 2 with HCl)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 0.5099 mL | 2.5494 mL | 5.0988 mL |
| | 5 mM | 0.1020 mL | 0.5099 mL | 1.0198 mL |
| | 10 mM | 0.0510 mL | 0.2549 mL | 0.5099 mL |

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

## BIOLOGICAL ACTIVITY

**Description**

LQVTDSGLYRCVIYHPP (LP17) is a triggering receptor expressed on myeloid cells (TREM-1) inhibitory peptide. LQVTDSGLYRCVIYHPP substantially alleviates ischemia-induced infarction and neuronal injury. LQVTDSGLYRCVIYHPP can get access into brain and block TREM-1[1].

**$IC_{50}$ & Target**

TREM-1[1]

**In Vitro**

LQVTDSGLYRCVIYHPP (LP17) (1 or 10 μM; 24 h) substantially decreases mRNA levels of pro-inflammatory cytokines and chemokines after reoxygenation and remarkably attenuates extracellular protein levels of IL-1β and IL-18 in a microglia oxygen-glucose deprivation (OGD) model[1].
LQVTDSGLYRCVIYHPP (LP17) (10 μM; 24 h) interacts with microglial SYK[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
RT-PCR[1]

| | |
|---|---|
| Cell Line: | Primary microglia |
| Concentration: | 1 or 10 μM |
| Incubation Time: | 24 h |
| Result: | Decreased mRNA levels of NLRP3, IL-1β, IL-18, IL-6, CD16, CD32, iNOS, MCP-1, CXCL-1, and CXCL-2 after reoxygenation. |

Western Blot Analysis[1]

| | |
|---|---|
| Cell Line: | Primary microglia |
| Concentration: | 10 μM |
| Incubation Time: | 24 h |
| Result: | Suppressed ischemia/reperfusion-induced increments in CARD9, p-p65 in CARD9/NF-κB signaling and NLRP3, ASC, cleaved caspase-1, mature IL-1β, and mature IL-18 in NLRP3/caspase-1 signaling in a microglia oxygen-glucose deprivation (OGD) model. |

**In Vivo**

LQVTDSGLYRCVIYHPP (LP17) (0.5 or 1 mg/kg; intranasal; daily for 3 days) alleviates ischemia-induced infarction and neuronal injury in mice[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|---|---|
| Animal Model: | Adult male C57BL/6J mice (20-25 g), mice cerebral ischemia/reperfusion (I/R) model induced by middle cerebral artery occlusion (MCAO)[1] |
| Dosage: | 0.5 mg/kg or 1 mg/kg |
| Administration: | Intranasal administration, once daily for 3 consecutive days after MCAO |
| Result: | Abolished ischemia-induced TREM-1 elevation at 1 mg/kg. Significantly reduced infarct volume by 27.3%, induced a markedly reduction in TUNEL positive cells and FJC positive neurons at 1 mg/kg. Rescued neurological deficits and cognitive dysfunction of MCAO mice. Inhibited microglial M1 polarization and neutrophil infiltration. |

## REFERENCES

[1]. Pengfei Xu, et al. Microglial TREM-1 receptor mediates neuroinflammatory injury via interaction with SYK in experimental ischemic stroke. Cell Death Dis. 2019 Jul 19;10(8):555.



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