

## Data Sheet (Cat.No.TP1397)

QL9

### Chemical Properties

CAS No.:	159646-83-0
Formula:	C52H74N10O14
Molecular Weight:	1063.21
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

### Biological Description

Description	QL9 is derived from the enzyme 2-oxoglutarate dehydrogenase and belongs to the endogenous peptide repertoire of all H-2d APCs.
Targets(IC <sub>50</sub> )	TCR: None
In vitro	Mouse T cell clone 2C recognizes two different major histocompatibility (MHC) ligands, the self MHC Kb and the allogeneic MHC Ld. Two distinct peptides, SIY (SIYRYGL) and QL9 (QLSPFPFDL), act as strong and specific agonists when bind to Kb and Ld, respectively. QL9 binding to MHC Ld is influenced by the majority of peptide side chains, distributed across the entire length of the peptide. Findings with both systems, but QL9-Ld in particular, suggest that many single-residue substitutions, introduced into peptides to improve their binding to MHC and thus their vaccine potential, could impair T cell reactivity due to their dual impact on TCR binding. T cell activation assays are performed to measure effects of peptide SIY and QL9 residues on T cell function[2].

### Solubility Information

Solubility	H2O: 33.33 mg/mL (31.35 mM) ( < 1 mg/ml refers to the product slightly soluble or insoluble)
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#### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.941 mL	4.703 mL	9.405 mL
5 mM	0.188 mL	0.941 mL	1.881 mL
10 mM	0.094 mL	0.47 mL	0.941 mL
50 mM	0.019 mL	0.094 mL	0.188 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

#### Reference

1. Speir JA, et al. Structural basis of 2C TCR allorecognition of H-2Ld peptide complexes. *Immunity*. 1998 May;8(5):553-62.

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Tel:781-999-4286

E-mail:info@targetmol.com

Address:36 Washington Street,Wellesley Hills,MA 02481