

Product number
#10550

Galactosylated CII peptide (CII₂₅₉₋₂₇₃-GalHyl₂₆₄) – 100µg

- For studies on T-Cell Responses Associated with Autoimmune Arthritis

Description

The Galactosylated CII peptide (CII₂₅₉₋₂₇₃-GalHyl₂₆₄) contains the 259 to 273 sequence of rat CII with with a β-D-galactopyranosyl residue on L-hydroxylysine at position 264 (GalHyl₂₆₄). It is the dominant T-cell epitope in collagen induced arthritis (CIA) in mice¹. The Galactosylated CII peptide (CII₂₅₉₋₂₇₃-GalHyl₂₆₄) activates autoimmune T-cells when presented by the MHC II Aq protein². The Galactosylated CII peptide (CII₂₅₉₋₂₇₃-GalHyl₂₆₄) can be used as an in vitro stimulus in antigen-specific T-cell recall assays for quantitation of T cell activity^{1,2,3,4,5} by determining the selected readout by ELISA, ELISpot, flow cytometry or RNAseq, e.g.

Sequence

H2N-Gly-Ile-Ala-Gly-Phe-Lys{(R)-δ-hydroxy-(β-D-galactopyranoside)}-Gly-Glu-Gln-Gly-Pro-Lys-Gly-Glu-Thr-COOH

Peptide backbone sequence origin

Collagen alpha-1(II) chain, COL2A1, type II collagen, CII; UniProt: [P05539](http://www.uniprot.org/entry/P05539).

Size

100 µg; á 20µl

Supplied as

5 µg/µl in PBS

Molecular weight

1653.76 g/mol

Storage

It is recommended to store the peptide in aliquots at -20°C, or preferably at -80°C, unless stability data would suggest otherwise. If the peptide is stored less than 48 hours before use, the peptide may be stored at 5°C (or room temperature). Avoid repeated thawing and freezing procedures.

Recommended dilution

It is recommended that the user determines the optimal dilution for their application. For in vitro T cell stimulation, a concentration of 10 µg/ml⁵ and a concentration of 20 µg/ml for IL-17 ELISpot assays⁴ has been used.

*For Research Use Only. Not for use in diagnostic procedures.
Not for resale without express authorization.*

References

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2. Andersson IE, Andersson CD, Batsalova T, Dzhambazov B, Holmdahl R, Kihlberg J, Linusson A. Design of glycopeptides used to investigate class II MHC binding and T-cell responses associated with autoimmune arthritis. PLoS One. 2011 Mar 15;6(3):e17881. PMID: [21423632](https://pubmed.ncbi.nlm.nih.gov/21423632/).
3. Lindgren C, Andersson IE, Berg L, Dobritzsch D, Ge C, Haag S, Uciechowska U, Holmdahl R, Kihlberg J, Linusson A. Hydroxyethylene isosteres introduced in type II collagen fragments substantially alter the structure and dynamics of class II MHC A(q)/glycopeptide complexes. Org Biomol Chem. 2015 Jun 14;13(22):6203-16.. PMID: [25960177](https://pubmed.ncbi.nlm.nih.gov/25960177/).
4. Klocke K, Sakaguchi S, Holmdahl R, Wing K. Induction of autoimmune disease by deletion of CTLA-4 in mice in adulthood. Proc Natl Acad Sci U S A. 2016 Apr 26;113(17):E2383-92. PMID: [27071130](https://pubmed.ncbi.nlm.nih.gov/27071130/).
5. Merky P, Batsalova T, Bockermann R, Dzhambazov B, Sehnert B, Burkhardt H, Bäcklund J. Visualization and phenotyping of proinflammatory antigen-specific T cells during collagen-induced arthritis in a mouse with a fixed collagen type II-specific transgenic T-cell receptor β-chain. Arthritis Res Ther. 2010;12(4):R155. PMID: [20682070](https://pubmed.ncbi.nlm.nih.gov/20682070/)

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