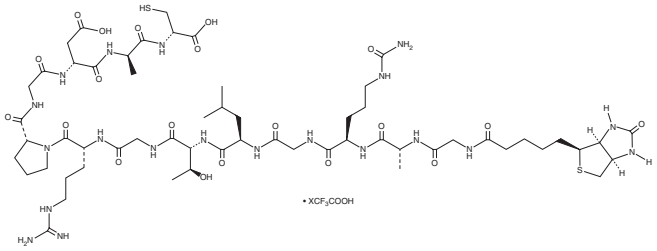
PRODUCT INFORMATION

Citrullinated [Cys^{369}]-Collagen Type II (R360) (358-369)-biotin Peptide (trifluoroacetate salt)

Item No. 44491

Formal Name: (R)-4-(((R)-1-(((S)-1-carboxy-2-mercaptoethyl)amino)-1-oxopropan-2-yl)amino)-4-oxo-3-(2-((R)-1-(((R)-2-((R)-2-(2-(5-((3aS,4S,6aR)-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)pentanamido)acetamido)propanamido)-5-ureidopentanoyl)glycyl-D-leucyl-D-threonylglycyl-D-arginyl)pyrrolidine-2-carboxamido)acetamido)butanoic acid, trifluoroacetate salt



Peptide Sequence: Biotin-GAXGLTGRPGDAC-OH (X=citrulline)

MF: $C_{58}H_{96}N_{20}O_{20}S_2 \bullet XCF_3COOH$

FW: 1,457.6

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Citrullinated [Cys^{369}]-collagen type II (R360) (358-369)-biotin peptide (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the citrullinated [Cys^{369}]-collagen type II (R360) (358-369)-biotin peptide (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Citrullinated [Cys^{369}]-collagen type II (R360) (358-369)-biotin peptide (trifluoroacetate salt) is slightly soluble (0.1-1 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of citrullinated [Cys^{369}]-collagen type II (R360) (358-369)-biotin peptide (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. Citrullinated [Cys^{369}]-collagen type II (R360) (358-369)-biotin peptide (trifluoroacetate salt) is soluble (>10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Citrullinated [Cys^{369}]-collagen type II (R360) (358-369)-biotin peptide is a biotinylated derivative of a mono-citrullinated peptide corresponding to a sequence found in the fibril-forming heterotrimeric protein collagen type II, which undergoes citrullination by peptidyl arginine deiminase 2 (PAD2) and PAD4.[1] It also contains a glycine-to-cysteine substitution at position 369. A synthetic peptide epitope derived from collagen type II citrullinated at R360 reacts with anti-citrullinated protein antibodies (ACPAs) isolated from mice with collagen-induced arthritis. This product can be used for the detection of autoantibodies against collagen type II citrullinated at R360.

Reference

1. Uysal, H., Nandakumar, K.S., Kessel, C., *et al.* Antibodies to citrullinated proteins: Molecular interactions and arthritogenicity. *Immunol. Rev.* **233(1)**, 9-33 (2009).

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