PRODUCT INFORMATION

Myelin Basic Protein Peptide Antagonist (trifluoroacetate salt)

Item No. 36964

Formal Name: L-α-glutamyl-L-lysyl-L-prolyl-L-lysyl-L-valyl-L-α-glutamyl-L-alanyl-L-tyrosyl-L-lysyl-L-alanyl-L-alanyl-L-alanyl-L-alanyl-L-prolyl-L-alanine, trifluoroacetate salt
Synonyms: EKPKVEAYKAAAAPA-OH, MBP Peptide Antagonist
MF: $C_{70}H_{114}N_{18}O_{21} \bullet XCF_3COOH$
FW: 1,543.8
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years

H—Glu—Lys—Pro—Lys—Val—Glu—Ala—Tyr—Lys—Ala—Ala—Ala—Ala—Pro—Ala—OH • XCF_3COOH

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

Laboratory Procedures

Myelin basic protein (MBP) peptide antagonist (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the MBP peptide antagonist (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. MBP peptide antagonist (trifluoroacetate salt) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of MBP peptide antagonist (trifluoroacetate salt) in these solvents is approximately 3 and 1 mg/ml, respectively.

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 MBP peptide antagonist (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of MBP peptide antagonist (trifluoroacetate salt) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

MBP peptide antagonist is a synthetic peptide antagonist against the multiple sclerosis (MS) autoantigen MBP.[1] MBP peptide antagonist binds to the immunomodulatory region of MBP, corresponding to residues 85-99 and inhibits MBP binding to human HLA-DR2 in a concentration-dependent manner. It inhibits the production of IL-2 in T cell hybridoma cells expressing an MBP (85-99)-specific T cell receptor derived from a patient with multiple sclerosis. MBP peptide antagonist also delays MBP (85-99)-induced experimental autoimmune encephalomyelitis (EAE) onset and reduces EAE symptom severity in double-transgenic humanized mice expressing human HLA-DR2 and MBP (85-99)-specific T cell receptor antigen in a model of MS when administered at a dose of 100 µg/animal.

Reference

1. Stern, J.N.H., Illés, Z., Reddy, J., *et al.* Peptide 15-mers of defined sequence that substitute for random amino acid copolymers in amelioration of experimental autoimmune encephalomyelitis. *Proc. Natl. Acad. Sci. USA* **102(5)**, 1620-1625 (2005).

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