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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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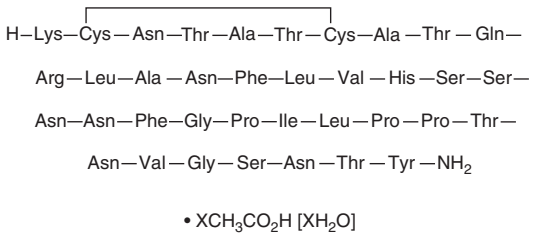
PRODUCT INFORMATION

Pramlintide (acetate hydrate)

Item No. 24093

CAS Registry No.: 196078-30-5
Formal Name: 25-L-proline-28-L-proline-29-L-proline-amylin (human), monoacetate hydrate
MF: $C_{171}H_{267}N_{51}O_{53}S_2 \bullet XC_2H_4O_2$ [XH_2O]
FW: 3,949.4
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Pramlintide (acetate hydrate) is supplied as a solid. A stock solution may be made by dissolving the pramlintide (acetate hydrate) in the solvent of choice. Pramlintide (acetate hydrate) is soluble in organic solvents such as DMSO, which should be purged with an inert gas, at a concentration of approximately 10 mg/ml.

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

Description

Pramlintide is a non-amyloidogenic analog of the antidiabetic peptide hormone amylin (Item Nos. 24274 | 24275) that contains proline residues substituted at positions 25, 28, and 29.[1] It stimulates cAMP production in HEK293 cells expressing human amylin receptor 1a (AMY_{1a}), AMY_{2a}, and AMY_{3a} (EC_{50}s = 0.35, 22.9, and 0.89 nM, respectively).[2] Pramlintide inhibits human islet amyloid polypeptide fibrilization in a concentration-dependent manner.[3] *In vivo*, pramlintide (200 pg/kg) reduces brain levels of amyloid-β (1-40) (Aβ40; Item No. 21617) and increases spontaneous alternation in the Y-maze in the Tg2576 transgenic mouse model of Alzheimer's disease.[4]

References

1. Wang, H., Abedini, A., Ruzsicska, B., *et al.* Rationally designed, nontoxic, nonamyloidogenic analogues of human islet amyloid polypeptide with improved solubility. *Biochemistry* **53(37)**, 5876-584 (2014).
2. Gingell, J.J., Burns, E.R., and Hay, D.L. Activity of pramlintide, rat and human amylin but not Aβ1-42 at human amylin receptors. *Endocrinology* **155(1)**, 21-26 (2014).
3. Wang, H., Ridgway, Z., Cao, P., *et al.* Analysis of the ability of pramlintide to inhibit amyloid formation by human islet amyloid polypeptide reveals a balance between optimal recognition and reduced amyloidogenicity. *Biochemistry* **54(44)**, 6704-6711 (2015).
4. Zhu, H., Wang, X., Wallack, M., *et al.* Intraperitoneal injection of the pancreatic peptide amylin potently reduces behavioral impairment and brain amyloid pathology in murine models of Alzheimer's disease. *Mol. Psychiatry* **20(2)**, 252-262 (2015).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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