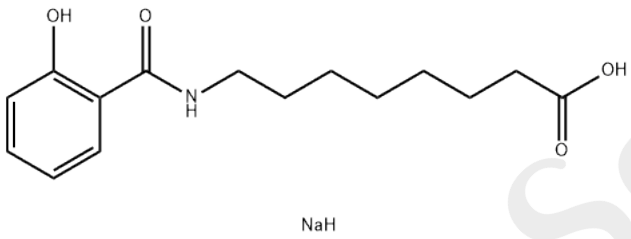
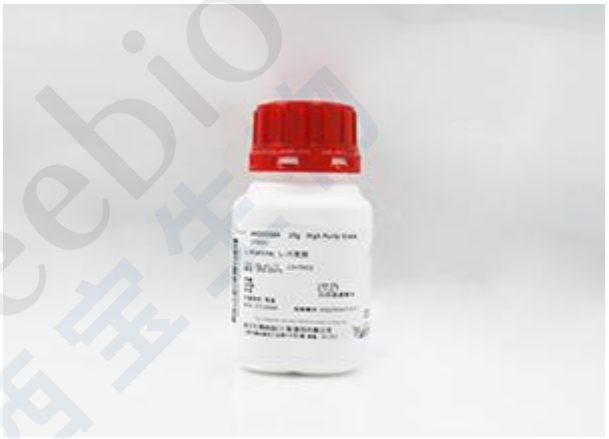
Oral drug absorption enhancer - SNAC

Product Information

- Product Name: Salcaprozate sodium(SNAC)
- Grade: Reagent Grade/Pharmaceutical Excipient Grade
- CAS No.:203787-91-1
- MW:301.32
- Molecular formula: $C_{15}H_{20}NNaO_4$
- Structural formula:





Product Introduction

Sodium 8-(2-hydroxybenzamido)octanoate, commonly known as SNAC, is an amino acid derivative that acts as an absorption enhancer. It effectively promotes the oral absorption of various protein drug solutions, including heparin, insulin, and human growth hormone. SNAC finds particular use in treating gastrointestinal diseases, particularly those stemming from the malabsorption of dicarbonate phosphate compounds.

SNAC, a biological sodium octanoate, forms a non-covalent bond complex with drug molecules, enhancing their lipophilicity and absorption. Its ability to improve gastrointestinal epithelial cell membrane permeability may be linked to changes in cell membrane perturbation, fluidization, and solubility of active pharmaceutical ingredients. Notably, studies have demonstrated that SNAC enhances the penetration of octreotide in the human colon mucosa without causing significant mucosal damage.

Emisphere Technologies, Inc. has incorporated SNAC into an oral dosage form of Eligen B12 for the treatment of vitamin B12 deficiency. Semaglutide, a glucagon-like peptide-1 (GLP-1) receptor agonist used in diabetes treatment, has seen a significant breakthrough with the approval of Novo Nordisk's semaglutide tablets (Rybelsus) by the U.S. FDA in September 2019. The addition of SNAC in Rybelsus enhances the gastrointestinal permeability of semaglutide, increasing its plasma exposure and oral bioavailability, making oral administration of the peptide a viable option.

Sodium octanoate has the ability to modify the fluidity of the gastrointestinal tract membrane, leading to enhanced protein release within cells and subsequently improved cell permeability. Utilizing these properties, Chiasma, an Israeli company, has developed a TPE (Transient Permeation Enhancement) technology absorption promotion platform. This technology has successfully culminated in the preparation of an oral octreotide formulation. The formulation comprises medium-chain fatty acids, sodium octanoate, and other excipients, formulated as an oily suspension with octreotide. This suspension is then encapsulated within a pH-sensitive polymer enteric coating. In June 2020, the U.S. Food and Drug Administration (FDA) approved the somatostatin analog octreotide enteric-coated capsules (Mycapssa) for the long-term maintenance treatment of acromegaly patients.Mycapssa leverages TPE technology, employing enteric-coated capsules to safeguard octreotide from degradation in the stomach. Once in the intestine, the absorption enhancer sodium octanoate instantaneously and reversibly loosens the tight junctions between intestinal cells. This action enhances the bypass transport of the drug, thereby improving its oral bioavailability. Notably, the bioavailability of a single oral capsule of Mycapssa (20 mg) is comparable to that of a 0.1 mg subcutaneous injection of octreotide.

Product List

Product name	Product grade	Packaging
Salcaprozate sodium(SNAC)	Reagent grade	1g、5g
Salcaprozate sodium(SNAC)	Pharmaceutical Excipient Grade	100g、1Kg、5Kg

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