

Product Data Sheet



5-CR110 SE

Catalog ID: 140101-5

Revised: 2025-01-31

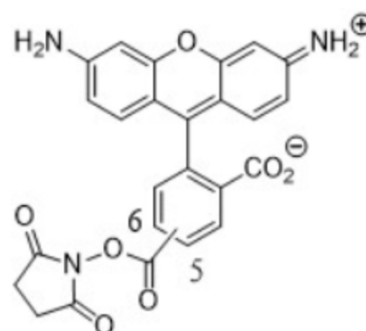
Description

5-Carboxyrhodamine 110 NHS Ester (also known as Rhodamine Green™ Carboxylic Acid, Succinimidyl Ester, Hydrochloride or 5-CR110 SE) is the nonsulfonated analog of Alexa Fluor® 488 dye. This amine-reactive dye is used to create bright and photostable green-fluorescent bioconjugates with excitation/emission maxima at approximately 499/525 nm. It is often preferred over 5-(6)-carboxyfluorescein NHS ester or FITC for many applications due to its exceptional photostability and pH insensitivity (pH 4–9).

While the mixed isomers of Carboxyrhodamine 110 NHS Ester are commonly used for labeling proteins, peptides, and nucleotides, purification of peptide and nucleotide conjugates labeled with mixed 5(6) isomers can be challenging due to signal broadening in HPLC purification. In contrast, peptides and nucleotides labeled with a single isomer, such as 5-CR110 SE, typically provide better resolution during HPLC purification, which is often required in conjugation processes. This makes the single-isomer form a more suitable choice for applications requiring high-purity conjugates.

Chemical Properties

CAS number	NA
Formula	C ₂₅ H ₁₈ ClN ₃ O ₇
Molecular Weight	507.89
HPLC Purity	≥95%
λ _{abs} (nm)	499
ε _{max} (M ⁻¹ cm ⁻¹)	8.4×10 ⁴
λ _{fl} (nm)	525
CF ₂₆₀ = ε ₂₆₀ /ε _{max}	0.24
CF ₂₈₀ = ε ₂₈₀ /ε _{max}	0.091



Storage

Upon receipt, store at -20°C in the dark. Protect from light and moisture. When stored as indicated, 5-CR110 SE is stable for at least 1 year.

This product is for Research Use Only. Not for Human or Veterinary or Therapeutic Use

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