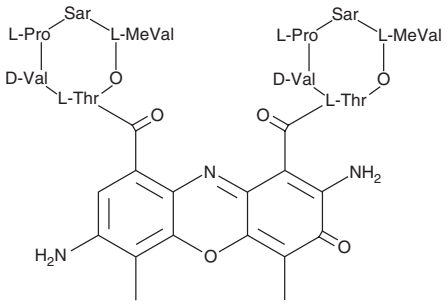
PRODUCT INFORMATION

7-Aminoactinomycin D

Item No. 11397

CAS Registry No.:	7240-37-1
Formal Name:	7-amino-actinomycin D
Synonyms:	7-AAD, NSC 239759
MF:	$C_{62}H_{87}N_{13}O_{16}$
FW:	1,270.4
Purity:	≥95%
UV/Vis.:	λ_{max}: 240, 529 nm
Ex./Em. Max:	488, 546, 578/650 nm
Supplied as:	A crystalline 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

7-Aminoactinomycin D (7-AAD) is supplied as a crystalline solid. A stock solution may be made by dissolving the 7-AAD in the solvent of choice. 7-AAD is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 7-AAD in these solvents is approximately 5 and 10 mg/ml, respectively.

7-AAD is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 7-AAD should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 7-AAD has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

7-AAD is a fluorescent DNA dye that is commonly used for the detection or exclusion of non-viable cells in flow cytometric analysis, as it is generally excluded by live cells.[1,2] It displays excitation spectra of 488, 546, and 578 nm and an emission spectrum of 650 nm.[3] As 7-AAD is detected in the far red range of the spectrum, it exhibits minimal spectral overlap with commonly used probes, therefore it can be used in conjunction with probes such as FITC.[1,3] 7-AAD has been used to evaluate apoptosis and cell-mediated cytotoxicity and to stain DNA in cells that have been fixed and permeabilized by a variety of methods.[1,2,4]

References

1. Schmid, I., Uittenbogaart, C.H., Keld, B., *et al.* A rapid method for measuring apoptosis and dual-color immunofluorescence by single laser flow cytometry. *J. Immunol. Methods* **170(2)**, 145-157 (1994).
2. Coder, D.M. Assessment of cell viability. *Curr. Protoc. Cytom.* **15 (Suppl 15)**, 9.2.1-9.2.4, (1997).
3. Stokke, T., Holte, H., and Steen, H.B. *In vitro* and *in vivo* activation of B-lymphocytes: A flow cytometric study of chromatin structure employing 7-aminoactinomycin D. *Cancer Res.* **48(23)**, 6708-6714 (1988).
4. Lecoeur, H., Février, M., Garcia, S., *et al.* A novel flow cytometric assay for quantification and multiparametric characterization of cell-mediated cytotoxicity. *J. Immunol. Methods* **253(1-2)**, 177-187 (2001).

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