Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@hellobio.com

DATASHEET

Oxazole Yellow Iodide 1mM solution (in 1mL DMSO)

Product overview

Name	Oxazole Yellow Iodide 1mM solution (in 1mL DMSO)
Cat No	HB7753
Alternative names	Yo-Pro-1, YP1, YP-1
Biological description	**Overview** Oxazole Yellow iodide is also known as Yo-Pro-1 or YP1. 1mM solution (in 1mL DMSO). It is a carbocyanine nucleic acid stain which has a strong binding affinity to nucleic acids. It is a green fluorescent DNA marker which is commonly used to identify apoptotic cells. **Uses and applications** Oxazole Yellow (YP1) does not penetrate the plasma membrane of viable cells. However, during apoptosis, apoptotic processes cause the cell-membrane to become slightly permeable. This allows Oxazole Yellow (YP1) to enter these cells and bind to nucleic acids to allow detection of apoptotic cells. It is frequently used with propidium iodide when staining for apoptotic and necrotic cells as apoptotic cells remain impermeant to propidium iodide but permeable to Oxazole Yellow (YP1).
Biological action	Dyes & stains
Description	Oxazole Yellow iodide is also known as Yo-Pro-1. It is a commonly used apoptosis marker. 1mM solution (in 1mL DMSO)

Biological Data

Application notes	Oxazole yellow is a cyanine dye with strong affinity for nucleic acids used to stain apoptotic cells. Oxazole yellow from Hello Bio has an excitation peak at 491nm (when recorded at 507nm) and peak emission at 505nm (when excited at 490nm). For protocol see #Protocol 1 in application notes below.

Solubility & Handling

Storage instructions	-20°C (protect from light)
Solubility overview	DMSO solution
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	4-[(3-Methyl-2(3H)-benzoxazolylidene)methyl]-1-[3-(trimethylammonio)propyl]-quinolinium diiodide
Molecular Weight	629.32
Molecular Formula	$C_{24}H_{29}I_2N_3O$
CAS Number	152068-09-2
PubChem identifier	6439500

SMILES	CN\1C2=CC=CC=C2O/C1=C\C3=CC=[N+](C4=CC=CC=C34)CCC[N+](C)(C)C.[I-].[I-]
Source	Synthetic
InChiKey	ULHRKLSNHXXJLO-UHFFFAOYSA-L
Appearance	Yellow Solution

References

Evaluation of YO-PRO-1 as an early marker of apoptosis following radiofrequency ablation of colon cancer liver metastases

Fujisawa S *et al* (2014) Cytotechnology 66(2)
PubMedID 24065619

Evaluation of YO-PRO-1 as an early marker of apoptosis following radiofrequency ablation of colon cancer liver metastases

Fujisawa S *et al* (2014) Cytotechnology 66(2)
PubMedID 24065619

Rapid quantification of cell viability and apoptosis in B-cell lymphoma cultures using cyanine SYTO probes

Wlodkowic D *et al* (2011) Methods Mol Biol 740
PubMedID 21468970

Application of the novel nucleic acid dyes YOYO-1, YO-PRO-1, and PicoGreen for flow cytometric analysis of marine prokaryotes

Marie D *et al* (1996) Appl Environ Microbiol 62(5)
PubMedID 8633863