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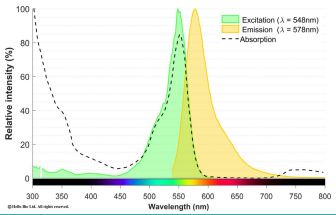
DATASHEET

Janelia Fluor® 549, free acid

Product overview

Name	Janelia Fluor® 549, free acid
Cat No	HB8745
Biological description	Cell-permeable, yellow fluorescent dye with a free acid reactive group. Used for the synthesis of Janelia Fluor® HaloTag® and SNAP-Tag® ligands for use in live cell imaging experiments (Grimm et al 2017) . Also suitable for flow cytometry. Janelia Fluor® 549 is 2 x brighter than TMR and Cy3 *in vitro* and live-cell experiments.
	Spectrally similar dyes: Alexa Fluor® 546, Alexa Fluor® 555, BDY TMR-X, Atto 550, CF 555, TAMRA, Cyanine 3
Alternative names	JF549, free acid
Biological action	Dyes & stains
Description	Yellow dye supplied as a free acid. Suitable for dSTORM, STED, confocal microscopy, live cell imaging and flow cytometry.

Images



Biological Data

Application notes

#Protocol 1: Measurement of excitation and emission spectra of Janelia Fluor ® 549, free acid

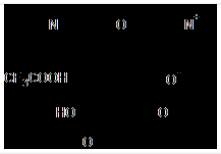
- Janelia Fluor® 549, free acid was prepared at 1µm in PBS.
- Spectra were generated on a Tecan Infinite M200 PRO using the following parameters:
  - Excitation: Recording at 638nm while exciting between 280nm and 610nm
  - Emission: Exciting at 509nm while recording between 535nm and 800nm
  - Absorbance: Measured between 300 and 800nm

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in DMSO (100 mM)
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	3,6-Di-1-azetidinyl-9-(2,5-dicarboxyphenyl)xanthylium, inner salt trifluoroacetate

Molecular Weight	568.5
Chemical structure	
Molecular Formula	$C_{27}H_{22}N_2O_5 \cdot C_2HF_3O_2$
CAS Number	2245946-45-4
PubChem identifier	137919862
SMILES	C1CN(C1)C2=CC3=C(C=C2)C(=C4C=CC(=[N+]5CCC5)C=C4O3)C6=C(C=CC(=C6)C(=O)[O-])C(=O)O.C(=O)(C(F)(F)F)O
Source	Synthetic
InChiKey	GFUAWSMWTYTASE-UHFFFAOYSA-N
Appearance	Purple-grey solid
Licensing details	Sold under license from the Howard Hughes Medical Institute, Janelia Research Campus

References

A general method to improve fluorophores for live-cell and single-molecule microscopy.

Grimm JB et al (2015) Nature methods 12

PubMedID 25599551

Synthesis of Janelia Fluor HaloTag and SNAP-Tag Ligands and Their Use in Cellular Imaging Experiments.

Grimm JB et al (2017) Methods in molecular biology (Clifton, N.J.) 1663

PubMedID 28924668