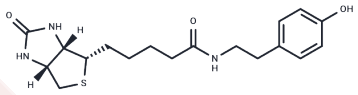
Data Sheet (Cat.No.T19209)

TargetMol

Biotinyl tyramide

Chemical Properties



CAS No. : 41994-02-9

Formula: C18H25N3O3S

Molecular Weight: 363.47

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Biotinyl tyramide, a biotin derivative, is used for tyramide signal amplification, as a reagent to amplify both in situ hybridization and immunohistochemical signals protocols.
Targets(IC50)	Others
Cell Research	I. Solution preparation 1. Preparation of stock solution: The common concentration range is 1 μM to 10 μM, and the specific concentration can be optimized according to the sample type, antibody concentration and required signal intensity. 2. Peroxidase solution: HRP-labeled primary antibody (or other peroxidase-labeled antibody) is usually used. Dilute to the appropriate concentration according to the manufacturer's instructions. II. Immunolabeling and color development reaction 1. Antigen retrieval: Depending on the nature of the antigen and the antibody used, an antigen retrieval step (such as heat-induced antigen retrieval, HIER) may be required. 2. Blocking: Block tissue or cell sections with blocking solution to prevent nonspecific binding. 3. Primary antibody incubation: Incubate the sample with the primary antibody labeled with peroxidase. The incubation time is usually 1-2 hours (can be optimized according to the antibody instructions). 4. Secondary antibody incubation (if a secondary antibody is used): Incubate the sample with the secondary antibody labeled with peroxidase, usually for 30-60 minutes. 5. TSA reaction: Add Biotinyl tyramide solution and incubate for 10-30 minutes. TSA reaction requires peroxidase catalysis, so ensure the activity of peroxidase. 6. Labeling and color development: Biotinyl tyramide reacts with HRP to generate biotin, which further binds to avidin-labeled fluorescence or enzyme to produce a detectable signal (such as fluorescence or staining reaction). 7. Washing: After incubation, use washing buffer to remove excess reagents to ensure clear signals. 8. Visualization: Use a microscope to observe the results and stain as needed. Notes: 1. Reaction time: The reaction time of Biotinyl tyramide needs to be optimized according to the peroxidase concentration used and the sample type, usually 10-30 minutes. 2. Optimize concentration: Too high Biotinyl tyramide concentration may cause the

Cell Research	signal to be too strong and produce background noise, while low concentration may cause the signal to be too weak. 3. HRP activity: Ensure that the peroxidase-labeled antibody has good activity, otherwise the reaction efficiency may be reduced. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 100 mg/mL (275.13 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (9.08 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7513 mL	13.7563 mL	27.5126 mL
5 mM	0.5503 mL	2.7513 mL	5.5025 mL
10 mM	0.2751 mL	1.3756 mL	2.7513 mL
50 mM	0.055 mL	0.2751 mL	0.5503 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Dráberová E, et al. Quantification of α-tubulin isotypes by sandwich ELISA with signal amplification through biotinyl-tyramide or immuno-PCR. J Immunol Methods. 2013 Sep 30;395(1-2):63-70.
Schmidt H,et al. Gold-FISH: a new approach for the in situ detection of single microbial cells combining fluorescence and scanning electron microscopy. Syst Appl Microbiol. 2012 Dec;35(8):518-25.
Balbinotti RA, Ret al. hMLH1, hMSH2 and cyclooxygenase-2 (cox-2) in sporadic colorectal polyps. Anticancer Res. 2007 Nov-Dec;27(6C):4465-71. PMID: 18214062.
Hunyady B, et al. Immunohistochemical signal amplification by catalyzed reporter deposition and its application in double immunostaining. J Histochem Cytochem. 1996 Dec;44(12):1353-62.