Product Data Sheet

Product Name: Biotin-XX Tyramide Reagent
Cat. No.: GC12033

Chemical Properties

Cas. No.			
Chemical Name	N-(4-hydroxyphenethyl)-6-(6-(5-((3aS,4S,6aR)-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)pentanamido)hexanamido)hexanamide		
SMILES	O=C1N[C@@]([H])([C@]([H])(CS2)N1)[C@@H]2CCCCC(NCCCCCC(NCCCCCC(NCCC3=CC=C(O)C=C3)=O)=O)=O		
Formula	$C_{30}H_{47}N_5O_5S$	M.Wt	589.79
Solubility	≥ 59mg/mL in DMSO, ≥ 14.1 mg/mL in EtOH with ultrasonic	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Biotin-XX Tyramide Reagent		

Protocol

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1.□□□□□□□TSA□□□□□□□□□□□□□□□ [1]□TSA□□□□□□□□□□Biotin-XX Tyramide□□□□GC12033□□□□□□□□□□(□DAPI)□□□□□□GC26283□□HRP-conjugated Streptavidin □□□□□GC26343□□Streptavidin-FITC□□□□□GC19886□□TNT□□□□pH 7.5□(□□0.1 M Tris-HCl □0.15 M NaCl□0.05% Tween 20) □TNB□□□□TNT□□□+0.5□BSA□□

2. HRP Streptavidin binding□□□

①□TNB□□□□□□□□□□□□□□□HeLa□□30□□□

②□TNB□□□□□1:1000□□HRP Streptavidin binding□□□ HeLa□□□□□□30□□□

③□TNT□□□□□□□□□□(TNB□□□□BSA□□□□□)□

3.TSA □□□

①□ HeLa □□□□□□□□□□□10□□□□□□□□□1 μg/mL □□□-XX-□□□□□□BXXP□ □ 1 mM H_2O_2 □□□ 0.1 M □□□□□□ □pH 8.5□□□

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②□ TNT □□□□□□□□□
4. Streptavidin-FITC □□□
①□ TNB □□□□□□□□□□□□□□□ HeLa □□ 20 □□□
②□ TNB □□□□□□ 1.0 μg/mL Streptavidin-FITC □□□ HeLa □□□□□ 30 □□□
③□ TNT □□□□□□□□□□□
5.□□□□□□□□□
①□□□□□□□□□□(□DAPI) □10 μL□ □□□□□□□□□□□□

②□□□□□□□□ HeLa □□□□□□□□□ 24 □□□□□□□□□□□DAPI□□□□□□□□□□□□□□□□

③□□□□□□□495nm/525nm (□□) □□□□□□□□□□□□□□□□

Background

Biotin-XX Tyramide Reagent is a biotin derivative for enzyme-mediated tyramide signal amplification (TSA) . Biotin-XX Tyramide Reagent utilizes horseradish peroxidase (HRP) to catalyze the covalent deposition of a biotin label adjacent to an immobilized enzyme. The deposited label can be detected with a streptavidin conjugate for imaging under bright field or fluorescence microscopy. The labeling reaction is fast (less than 10 minutes) [1]. Biotin-XX Tyramide Reagent can be used to increase the sensitivity of immunohistochemistry [2].

References:
[1] Hopman AH, Ramaekers FC, Speel EJ. Rapid synthesis of biotin-, digoxigenin-, trinitrophenyl-, and fluorochrome-labeled tyramides and their application for In situ hybridization using CARD amplification. J Histochem Cytochem. 1998 Jun;46(6):771-7.
[2] Freedman LJ, Maddox MT. A comparison of anti-biotin and biotinylated anti-avidin double-bridge and biotinylated tyramide immunohistochemical amplification. J Neurosci Methods. 2001 Nov 15;112(1):43-9.

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