Product Datasheet

PiColorLock (TM) Phosphate Detection Reagent 303-0125

Unit Size: 2500 Tests

Store at 4C.



Publications: 82

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303-0125

PiColorLock (TM) Phosphate Detection Reagent

Product Information	
Unit Size	2500 Tests
Concentration	Please see the protocols for proper use of this product. If no protocol is available, contact technical services for assistance.
Storage	Store at 4C.
Product Description	
Description	PiColorLock phosphate detection reagent changes colour in the presence of inorganic phosphate (Pi). This can be exploited to measure any enzyme that generates Pi including ATPases, GTPases, phosphatases, heat-shock proteins and DNA unwinding proteins.
	The unique formulation of PiColorLock affords enhanced assay linearity, dynamic range and colour stability; it is also possible with PiColorLock to work with unstable substrates (e.g. ATP, GTP) that give high non-enzymatic background signals with other acidic dye-based detection reagents.
	FeaturesBenefitsColorimetric assaySimple, scalable and non- radioactiveCompatible with almost any assay bufferFlexibility over a wide range of existing assaysStable reagent formulationLong shelf lifeUnique accelerator and stabilizerSpeeds up color developmentPiColorLock-Pi complex is very stableNo precipitation, results can be measured over several hours - ideal for HTSWide linear rangeNo inhibition of color development by high concentrations of protein
Notes	This product is manufactured by Abcam and distributed by Novus Biologicals. This product is for research use only and is not approved for use in humans or in clinical diagnosis. This product is guaranteed for 1 year from date of receipt and this statement overrides any mentioned guarantee period on the limitations section of this products datasheet. Please contact technical@novusbio.com with questions.



PiColorLock™ Gold

- Competitor A

Competitor B

Images PiColorLock Gold Colorimetric Assay Kit [303-0125] - Universal assay for inorganic phosphate. Phosphorylated substrate (X-P) is acted on by an enzyme releasing X and inorganic phosphate. The reaction is halted by the addition of an acidified dye reagent (orange), which turns green or yellow in the presence or absence of inorganic phosphate. PiColorLock Gold Colorimetric Assay Kit [303-0125] - Most detection B reagents form very unstable dye complexes and samples need to be read promptly. In cuvette assays there can be a total loss of signal if a A = competitor A precipitate forms and settles. In plate assays, the data become extremely erratic when clumps of material form in the light path. PiColorlock B = competitor B complexes are stable for many hours, which allows multiple assay plates or cuvettes to be conveniently set up as a batch and read later using C = PiColorLock[™] plate stackers or other automated equipment. PiColorLock Gold Colorimetric Assay Kit [303-0125] - Shows the effect of 1.00 incubating ATP (without any added enzyme) with three commercial dye-0.75 based detection reagents. 0.50 0.25 0.00 25 50 75 100 125 Time (min) PiColorLock Gold Colorimetric Assay Kit [303-0125] - For the purposes 2.5 of comparison, data for PiColorlock ALS reagent (no longer available) is Gold ALS (n/a) also shown, as it provides similar absorbance values to competitor 2.0 products, at least at low levels of inorganic phosphate. Competitors' products are linear over a much narrower range of concentrations. A650 1.5 ompetitor B PiColorlock ALS reagent has now been superseded by PiColorlock Gold. 1.0 which gives higher OD values. Competitor A 0 0.0 50 100 150 200 250



[P_i] uM

Publications

El Gendy MAM, Hassanein H, Saleh FM et al. Hydrazonoyl chlorides possess promising antitumor properties Life sciences 2022-02-07 [PMID: 35143825]

Medellin B, Yang W, Konduri S et al. Targeted Covalent Inhibition of Small CTD Phosphatase 1 to Promote the Degradation of the REST Transcription Factor in Human Cells Journal of medicinal chemistry 2021-12-21 [PMID: 34931516]

Brewer M, Machio-Castello M, Viana R Et al. An empirical pipeline for personalized diagnosis of Lafora disease mutations iScience 2021-11-01 [PMID: 34755096]

Spillman NJ, Allen RJ, McNamara CW et al. Na+ Regulation in the Malaria Parasite Plasmodiumfalciparum Involves the Cation ATPase PfATP4 and Is a Target of the Spiroindolone Antimalarials. Cell Host Microbe. [PMID: 23414762] (EnzAct, Parasite)

Details: Plasmodium falciparum

Dores-Silva PR, Nishimura LS, Kiraly VT et al. Structural and functional studies of the Leishmania braziliensismitochondrial Hsp70: Similarities and dissimilarities to human orthologues. Arch Biochem Biophys. 2017-01-01 [PMID: 27840097]

Eniyan K, Kumar A, Rayasam GV et al. Development of a one-pot assay for screening and identification of Mur pathway inhibitors in Mycobacterium tuberculosis. Sci Rep. 2016-10-13 [PMID: 27734910]

Li C, Shen Y, Meeley R et al. Embryo defective 14 encodes a plastid-targeted cGTPase essential for embryogenesis in maize. Plant J. 2015-01-01 [PMID: 26771182]

Dellas N, Snyder JC, Dills M et al. Structure-Based Mutagenesis of Sulfolobus Turreted Icosahedral Virus B204 Reveals Essential Residues in the Virion-Associated DNA-Packaging ATPase. J Virol. 2015-12-23 [PMID: 26699645]

Zhou L, Zhang Q, Zhang P et al. c-Abl-mediated Drp1 phosphorylation promotes oxidative stress-induced mitochondrial fragmentation and neuronal cell death. Cell Death Dis. 2017-10-12 [PMID: 29022905]

Basu A, Yap MN. Disassembly of the Staphylococcus aureus hibernating 100S ribosome by an evolutionarily conserved GTPase. Proc Natl Acad Sci U S A. 2017-09-26 [PMID: 28894000]

Kandimalla R, Manczak M, Fry D et al. Reduced Dynamin-related Protein 1 Protects Against Phosphorylated Tauinduced Mitochondrial Dysfunction and Synaptic Damage in Alzheimer's Disease. Hum Mol Genet. 2016-11-15 [PMID: 28173111]

Press O, Zvagelsky T, Vyazmensky M et al. Construction of Structural Mimetics of the Thyrotropin Receptor Intracellular Domain. Biophys J. 2016-12-20 [PMID: 28002738]

More publications at http://www.novusbio.com/303-0125

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