

Product Datasheet

pSIVA Apoptosis Detection Kit

NBP2-29382

Unit Size: 1 Kit

Store at 4°C.

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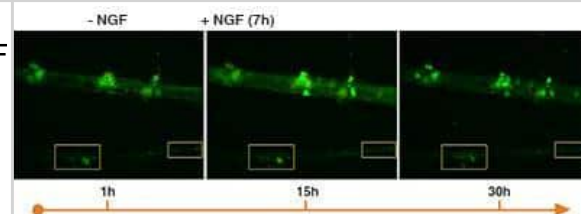
NBP2-29382

pSIVA Apoptosis Detection Kit

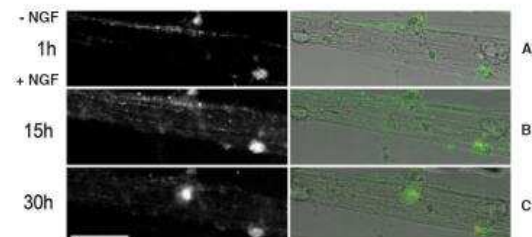
Product Information	
Unit Size	1 Kit
Concentration	Concentration is not relevant for this product. Please see the protocols for proper use of this product.
Storage	Store at 4°C.
Conjugate	IANBD
Product Description	
Description	Polarity Sensitive Indicator of Viability (pSIVA(TM)) is an Annexin based, polarity sensitive probe for the spatiotemporal or kinetic analysis of apoptosis and other forms of cell death. pSIVA(TM) binding is reversible, enabling researchers to detect transient phosphatidylserine (PS) exposure which is associated with normal physiological processes as well as with reversible or rescuable apoptosis cell death events. pSIVA(TM) is conjugated to IANBD, a polarity sensitive dye that fluoresces only when pSIVA(TM) is bound to the cell membrane. pSIVA's membrane-bound dependent fluorescence and reversible binding properties are a technological leap for detecting PS exposure and offer additional information on the apoptosis pathway and cell survival compared to Annexin V conjugates. Annexin V binding is nonreversible.
Species	Human, Mouse, Rat
Reactivity Notes	Mouse reactivity reported in scientific literature (PMID: 24999049). Human reactivity reported in scientific literature (PMID: 25692494). Rat reactivity reported in scientific literature (PMID: 19966809).
Kit Components	pSIVA-IANBD (200 uL), Propidium Iodide Staining Solution (500 uL)
Notes	pSIVA is protected under patent number: 8,541,549. This is the same kit which was sold as pSIVA(TM) - IANBD Apoptosis/Viability Microscopy Set [Catalog Number IMG-6701K] by Imgenex - now a part of Novus Biologicals, a Bio-Techne brand.
Product Application Details	
Applications	Immunocytochemistry/ Immunofluorescence, In vitro assay, In vivo assay, Live Imaging Microscopy
Recommended Dilutions	Immunocytochemistry/ Immunofluorescence, In vitro assay, In vivo assay, Live Imaging Microscopy
Application Notes	See attached PDF protocol for specific usage information. Use in Immunocytochemistry/immunofluorescence reported in scientific literature (PMID 24162663). use in ICC/IF, in vitro , and in vivo. reported in scientific literature (PMID: 19966809).

Images

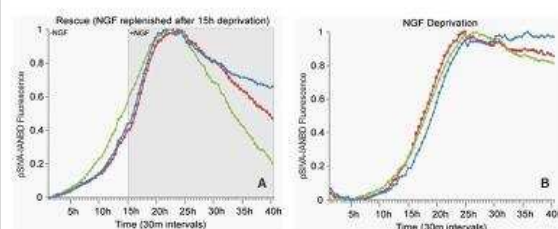
Live Imaging Microscopy: Polarity Sensitive Indicator of Viability Apoptosis Microscopy Kit [NBP2-29382] - Rescue of dying neurons: NGF withdrawal leads to cell death and pSIVA-IANBD(TM) fluorescence. Addition of NGF eventually rescues some neurons as shown by the loss of pSIVA-IANBD(TM) fluorescence (30h boxes).



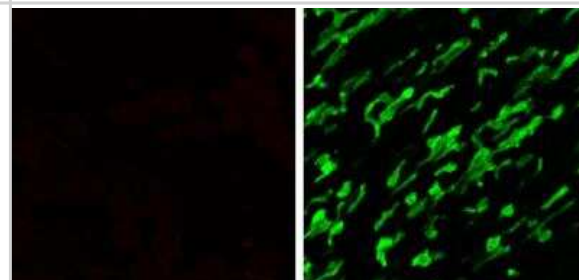
Live Imaging Microscopy: Polarity Sensitive Indicator of Viability Apoptosis Microscopy Kit [NBP2-29382] - Rescue of dying neurons. NGF withdrawal leads to cell death and pSIVA-IANBD(TM) fluorescence. Correlation of fluorescence and phase microscopy shows that NGF rescued the neurons as shown by the loss of pSIVA-IANBD(TM) fluorescence at 30h.



Live Imaging Microscopy: Polarity Sensitive Indicator of Viability Apoptosis Microscopy Kit [NBP2-29382] - Quantitative analysis of pSIVA-IANBD™ fluorescence is rescued and NGF deprived neuronal cultures. pSIVA-IANBD(TM) fluorescence from 3 areas of the culture shows that NGF rescue (A) of dying cells was associated with loss of fluorescence whereas unrescued cells (B) continued to fluoresce.



Live Imaging Microscopy: Polarity Sensitive Indicator of Viability Apoptosis Microscopy Kit [NBP2-29382] - Rescue of dying photoreceptors in dystrophic rat neural retina. Image from verified customer review.



Publications

Fan Yang, Mohammadali Almasieh, Leonard A. Levin In Vivo Imaging of Secondary Neurodegeneration Associated With Phosphatidylserine Externalization Along Axotomized Axons Investigative Ophthalmology & Visual Science 2024-02-12 [PMID: 38345553]

Jang J, Yeo S, Baek S et al. Abnormal accumulation of extracellular vesicles in hippocampal dystrophic axons and regulation by the primary cilia in Alzheimer's disease Acta neuropathologica communications 2023-09-04 [PMID: 37667395]

Gillespie KP, Pirnie R, Mesaros C, Blair IA. Cisplatin Dependent Secretion of Immunomodulatory High Mobility Group Box 1 (HMGB1) Protein from Lung Cancer Cells Biomolecules 2023-08-31 [PMID: 37759736]

Zhang L, Hu X, Meng Q et al. SHP2 inhibition improves celastrol-induced growth suppression of colorectal cancer Frontiers in Pharmacology 2022-09-01 [PMID: 36120370] (Block/Neutralize)

Vargas JA, Finnemann SC Differences in Diurnal Rhythm of Rod Outer Segment Renewal between 129T2/SvEmsJ and C57BL/6J Mice International journal of molecular sciences 2022-08-22 [PMID: 36012733] (ICC/IF, Mouse)

Ceolin S. Bystander Effects in Photodynamic Therapy of Cancer Cancers (Basel) 2019-10-31 [PMID: 31661869]

Miao S, Fourgeaud L, Burrola P et al. Tyro3 Promotes the Maturation of Glutamatergic Synapses SSRN Electronic Journal 2022-02-10

Li T, Yu D, Oak HC Et al. Phospholipid-flippase chaperone CDC50A is required for synapse maintenance by regulating phosphatidylserine exposure The EMBO journal 2021-11-02 [PMID: 34585770]

Esposito NJ, Mazzoni F, Vargas JA, Finnemann SC Diurnal Photoreceptor Outer Segment Renewal in Mice Is Independent of Galectin-3 Investigative ophthalmology & visual science 2021-02-01 [PMID: 33538769] (Mouse)

Agier J, Brzezinska-Blaszczyk E, Witczak P et al. The impact of TLR7 agonist R848 treatment on mast cell phenotype and activity Cellular Immunology 2020-10-01 [PMID: 33158544] (In Vivo, Mouse)

Zhang Y, Li H, Li X et al. TMEM16F Aggravates Neuronal Loss by Mediating Microglial Phagocytosis of Neurons in a Rat Experimental Cerebral Ischemia and Reperfusion Model Front Immunol 2020-07-07 [PMID: 32733436]

Time-Resolved Study of Nanoparticle Induced Apoptosis Using Microfabricated Single Cell Arrays. Rottgermann P, Dawson K, Radler J Microarrays (Basel) [PMID: 27600074] (Cellular fractionation, Human)

More publications at <http://www.novusbio.com/NBP2-29382>



Procedures

MSDS (NBP2-29382)

Hazard Information

Chemical Name: Propidium Iodide

CAS Number: 25535-16-4

Hazard Identification

Eye, skin

First Aid Measures

Eye Contact: Irrigate thoroughly with water for at least 15 minutes. Seek medical advice.

Skin Contact: Wash skin thoroughly with soap and water for at least 15 minutes. Remove contaminated clothing and wash before re-use. In severe cases, obtain medical attention.

Inhalation: Remove from exposure, rest and keep warm. In severe cases, seek medical advice.

Ingestion: Wash out mouth thoroughly with water and give plenty of water to drink. Seek medical advice.

Accidental Release Measures

Wear appropriate protective clothing. Inform others to keep a safe distance. Spread inert absorbent material liberally over spillage. If local regulations permit, mop up cautiously with plenty of water and run to waste, diluting greatly with running water. Otherwise transfer to container and arrange removal by disposal company. Wash site of spillage thoroughly with water.

Handling and Storage

Handling: No special handling required. Store at 4C or colder, protect from light.

Exposure Controls / Personal Protection

Ventilation: Use in an open, well-ventilated area

Gloves: Rubber or plastic

Eye Protection: Lab goggles or face shield

Physical and Chemical Properties

Form: Liquid

Color: Colorless

Odor: Odorless

Melting Point: 220-225C

Boiling Temperature: No data available

Density: No data available

Vapor Pressure: No data available

Solubility in Water: Very soluble

Flash Point: No data available

Explosion limits: No data available

Ignition Temperature: No data available

Stability and Reactivity: Stable at room temperature

Other Information

Transport: not classified as dangerous

Material Safety Data Sheet for IANBD

Hazard Information

Chemical Name: N-((2-(iodoacetoxy)ethyl)-N-methyl)amino-7-nitrobenz-2-oxa-1,3-diazole (IANBD ester)

Hazard Identification

The product contains no substances which at their given concentration are considered to be hazardous to health. NOVUS recommends handling all chemicals with caution.





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Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Kits are guaranteed for 6 months from date of receipt.

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