Product Datasheet

pSIVA Apoptosis Detection Kit
NBP2-29382

Unit Size: 1 Kit

Store at 4°C.

Reviews: 1  Publications: 24

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Updated 9/19/2018 v.20.1

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### Product Information

<table>
<thead>
<tr>
<th><strong>Unit Size</strong></th>
<th>1 Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concentration</strong></td>
<td>Concentration is not relevant for this product. Please see the protocols for proper use of this product.</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>Store at 4°C.</td>
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<tr>
<td><strong>Conjugate</strong></td>
<td>IANBD</td>
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### 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).

**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).
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
Publications


Tufail Y, Cook D, Fourgeaud L et al. Phosphatidylserine Exposure Controls Viral Innate Immune Responses by Microglia Neuron Jan 18 2017 12:00AM [PMID: 28111081]


Ewunkem AJ, Muganda PM. Determining the Extent of Toxicant-Induced Apoptosis Using Concurrent Phased Apoptosis Assays. Apoptosis Methods in Toxicology. 2016 Apr 14


Details:
Polarity Sensitive Indicator of Viability Apoptosis/pSIVA Microscopy Kit was used for analysis of mouse insulinoma MIN6 cells spheroids at 15 DIV. Apoptotic and necrotic cells were visualized by pSIVA-IANBD (green) and propidium iodide (PI, red), respectively, combined with DAPI staining during live imaging (Supplementary data, Online Resource 7).


Details:
Polarity Sensitive Indicator of Viability Apoptosis/pSIVA Microscopy Kit used for detection of apoptosis in LNCaP human prostate cancer cells treated or not with different concentrations of 70% ethanolic extract of tulsi/Ocimum sanctum for 24 and 48 hours.

Ceolin S. Bystander Effects in Photodynamic Therapy of Cancer (ICC/IF, In vitro)

Details:
After focal photosensitization, pSIVA-IANBD /PI added directly to the extracellular medium enriched with CaCl2 (2.5 mM) and cells imaged via time-lapse microscopy for 4 hrs.

Bohm K, Sun L, Thakor D, Wirth M. Caveolin-1 limits human influenza A virus (H1N1) propagation in mouse embryo-derived fibroblasts Virology. 2014 Jul 03 [PMID: 24999049] (ICC/IF, Mouse)

Details:
Polarity Sensitive Indicator of Viability Apoptosis kit ( pSIVA-IANBD - PI) used for quantification of apoptosis in human influenza A virus (H1N1) infected Caveolin-1 (-/-) mouse embryo-derived fibroblasts subjected to Cav-1 knock-in (MEF Cav-1 KO KI). Cells were stained for pSIVA-IANBD (an Annexin XII dye monitoring PS exposure) for apoptotic and PI (propidium iodide) for the detection of necrotic cells. pSIVA binding cells minus the necrotic cells gave the amount of apoptotic cells indicated as pSIVA positive apoptotic cells (Supplementary Fig 1)


Shan L. Annexin B12 Cys101,Cys260-N,N'-dimethyl-N-(iodoacetyl)-N'-(7-nitrobenz-2-oxa-1,3-diazol-4-yl)ethylenediamine. MICAD 2010 May 22 [PMID: 20642019]

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 4°C 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: 220-225°C
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.
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.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

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