

# PRODUCT CATALOG











We are committed to providing pure, high quality indicators to empower better research results in life science, neuroscience, and drug discovery. These products can be found in our online store, along with full documentation. Please feel free to email us at [sales@ionbiosciences.com](mailto:sales@ionbiosciences.com) for questions or further information.





## INDICATORS

### CALCIUM INDICATORS

The study of the function of Ca<sup>2+</sup> ions inside cells is one of the most dynamic areas of modern cell biology. Ca<sup>2+</sup> is known to control neurotransmission, secretion of hormones, muscle contraction, and a myriad of physiological functions. It is suspected to be involved in cell division, movements of non-muscle cells, as well as memory and learned patterns of the nervous system. In all cases, localized fluctuations in cytosolic free Ca<sup>2+</sup> levels inside cells are believed to control these functions. Techniques for the measurement and manipulation of Ca<sup>2+</sup> are therefore crucial and have been advancing rapidly largely as a result of invention of fluorescent ion indicators.



We list our fluorescent calcium indicators by grouping them according to the color of the light they emit on binding calcium, namely Red, Green, and Near UV. [Learn More >](#)

Item Name (*Special Order)	Product Number	Quantity	Price	MW (g/mol)	Excitation (nm)	Emission (nm)	K <sub>d</sub> (mM)	Solubility	Info + Ordering
<b>BAPTA AM*</b>	1081T	25mg	\$95	488	N/A	N/A	107	DMSO	
	1081U	25x1mg	\$145						
<b>Calcein AM</b>	1071B	1mg	\$135	995	N/A	N/A	4	DMSO	
	1071E	20x50µg	\$185						
<b>Fluo-2 AM HA</b>	1021B	1mg	\$125	1061	490	516	230	DMSO	
	1021E	20x50µg	\$175						
<b>Fluo-2 HA K<sup>+</sup> salt</b>	1022B	1mg	\$130	891	490	516	230	H <sub>2</sub> O	
	1022E	20x50µg	\$180						
<b>Fluo-3 AM</b>	1031B	1mg	\$150	1129	506	525	390	DMSO	
	1031E	20x50µg	\$200						
<b>Fluo-3 K<sup>+</sup> Salt</b>	1032B	1mg	\$145	959	506	525	390	H <sub>2</sub> O	
	1032E	20x50µg	\$195						
<b>Fluo-4 AM</b>	1041C	500µg	\$145	1096	488	516	335	DMSO	
	1041F	10x50µg	\$195						
<b>Fluo-4 K<sup>+</sup> Salt</b>	1042C	500µg	\$145	926	490	516	335	H <sub>2</sub> O	
	1042F	10x50µg	\$195						

<b>Fura-2 AM</b>	1051B	1mg	\$95	1002	371	471	145	DMSO	
	1051E	20x50µg	\$145						
<b>Fura-2 K<sup>+</sup> Salt</b>	1052B	1mg	\$95	832	363	505	145	H <sub>2</sub> O	
	1052E	20x50µg	\$145						
<b>Fura-2 LeakRes AM</b>	1061B	1mg	\$225	1132	369	471	145	DMSO	
	1061E	20x50µg	\$275						
<b>Fura-2 Leak Res K<sup>+</sup> Salt</b>	1062B	1mg	\$225	928	363	505	145	H <sub>2</sub> O	
	1062E	20x50µg	\$275						

## SODIUM INDICATORS


There is a large difference in the sodium ion (Na<sup>+</sup>) concentration inside and outside the cell (5-40 mM intracellular versus 120-450 mM extracellular, depending on organism). This concentration gradient is used to power nutrient uptake, to regulate concentrations of other intracellular ions and solutes, and to generate and transmit electrical impulses in excitable cells such as nerve and muscle. These functions are so important that organisms devote a major part of their metabolic energy to maintaining the sodium gradient. The low intracellular Na<sup>+</sup> concentration requires that a Na<sup>+</sup> indicator have the sensitivity to measure any small changes that occur. Moreover, intracellular potassium ion (K<sup>+</sup>) concentration is typically high (in excess of 100 mM) so a Na<sup>+</sup> indicator should respond selectively to Na<sup>+</sup>, not K<sup>+</sup>. [Learn More >](#)

Item Name	Product Number	Quantity	Price	MW (g/mol)	Excitation (nm)	Emission (nm)	K <sub>d</sub> (mM)	Solubility	Info + Ordering
<b>ION NaTRIUM Green-2 AM</b>	2011C	500µg	\$340	1084	525	545	20	DMSO	
	2011F	10x50µg	\$390						
<b>ION NaTRIUM Green-2 TMA<sup>+</sup> Salt</b>	2013C	500µg	\$340	1087	525	545	20	H <sub>2</sub> O	
	2013F	10x50µg	\$390						
<b>SBFI AM</b>	2021B	1mg	\$475	1127	335 - 348	510	4	DMSO	
	2021E	20x50µg	\$525						
<b>SBFI K<sup>+</sup> Salt</b>	2022B	1mg	\$355	991	345	544	4	H <sub>2</sub> O	
	2022E	20x50µg	\$405						

## pH INDICATORS

Knowledge of cytosolic pH (pHi) is essential in many cellular studies. Intracellular pH is generally between ~6.8 and 7.4 in the cytosol and ~4.5 and 6.0 in the cell's acidic organelles. Unlike intracellular free Ca<sup>2+</sup> concentrations, which can rapidly change, pH inside a cell varies by only fractions of a unit, and such changes can occur quite slowly. Intracellular pH can be estimated by measuring the ratio of the fluorescence intensities. Our indicators can detect physiological changes of no more than a few tenths of a pH unit. [Learn More >](#)

Item Name (*Special Order)	Product Number	Quantity	Price	MW (g/mol)	Excitation (nm)	Emission (nm)	pKa	Solubility	Info + Ordering
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BCECF AM*	4011B	1mg	\$98	821	500/450 hi/lo pH	531	7	DMSO	
	4011E	20x50µg	\$148						

## POTASSIUM INDICATORS

Importance of the potassium ion ( $K^+$ ) is coupled to the sodium ion ( $Na^+$ ), because the cell expends a major part of its metabolic energy maintaining the concentrations of  $Na^+$  and  $K^+$  within the cell. Intracellular concentration ranges are 10-40 mM for  $Na^+$  and 120-400 mM for  $K^+$ . Extracellular concentration ranges are 4-40 mM for  $K^+$  and 120-400 mM for  $Na^+$ . [Learn More >](#)

Item Name	Product Number	Quantity	Price	MW (g/mol)	Excitation (nm)	Emission (nm)	$K_d$ (mM)	Solubility	Info + Ordering
<b>ION Potassium Green-2 AM</b>	3011C	500µg	\$275	1128	526	546	18	DMSO	
	3011F	10x50µg	\$325						
<b>ION Potassium Green-2 TMA<sup>+</sup> Salt</b>	3013C	500µg	\$255	1131	526	546	18	H <sub>2</sub> O	
	3013F	10x50µg	\$305						
<b>PBFI AM</b>	3031B	1mg	\$550	1171	349	550	5	DMSO	
	3031E	20x50µg	\$525						
<b>PBFI TMA<sup>+</sup> Salt</b>	3033B	1mg	\$330	1175	338	490	5	H <sub>2</sub> O	
	3033E	20x50µg	\$380						

## ASSAY KITS

### CALCIUM ASSAY KITS

Item Name	Product Number	Quantity	Price	MW (g/mol)	Excitation (nm)	Emission (nm)	K <sub>d</sub> (mM)	Solubility	Info + Ordering
No Wash Calcium Assay	10000-001	1 micro-plate	\$174	N/A	N/A	N/A	N/A	N/A	
	10000-002	2 micro-plate	\$245						
	10000-10	10x1 microplates	\$369						
	10000-100	100 x1 microplates	\$3,495						

### THALLIUM ASSAY KITS

Item Name	Product Number	Quantity	Price	MW (g/mol)	Excitation (nm)	Emission (nm)	K <sub>d</sub> (mM)	Solubility	Info + Ordering
No Wash Thallium Assay	11000-001	1 micro-plate	\$198	840	N/A	N/A	N/A	N/A	
	11000-002	2 micro-plates	\$395						
	11000-10	10 micro-plates	\$800						
	11000-100	100 micro-plates	\$4,800						

## SPECIAL ORDERS

We are happy to answer your questions about special order products. Please contact our head of sales, Mark Huggans at [mhuggans@ionbiosciences.com](mailto:mhuggans@ionbiosciences.com) with your request.



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