

Product datasheet

Spexyte™ Intracellular pH Calibration Buffer Kit ab284662

[1 Image](#)

Overview

Product name	Spexyte™ Intracellular pH Calibration Buffer Kit
Detection method	Fluorescent
Assay type	Quantitative
Product overview	Spexyte™ Intracellular pH Calibration Buffer Kit (ab284662) provides a range of pH calibration buffers (pH 4.5~ 8.0) with nigericin, which modulate the intracellular pH with the external pH in the presence of 100"150 mM K ⁺ . When used in conjunction with pH indicators, such as BCFL, AM or BCECF, AM, ab284662 can create a standard curve which is used to determine the intracellular pH.

Notes Intracellular pH (pHi) plays an important modulating role in many cellular events, including cell volume regulation, cellular metabolism, calcium regulation, receptor-mediated signal transduction, ion transport, endocytosis, and other cellular processes. Intracellular pH is generally 6.8 ~7.4 in the cytosol and 4.5~6.0 in the acidic organelles. Intracellular pH changes have significant physiological effects, e.g., the pH-dependent concentration of intracellular messengers such as Ca²⁺ and cAMP affects cellular signaling. Several recent reports showed the dysregulated pH is emerging as a hallmark of cancer cells.

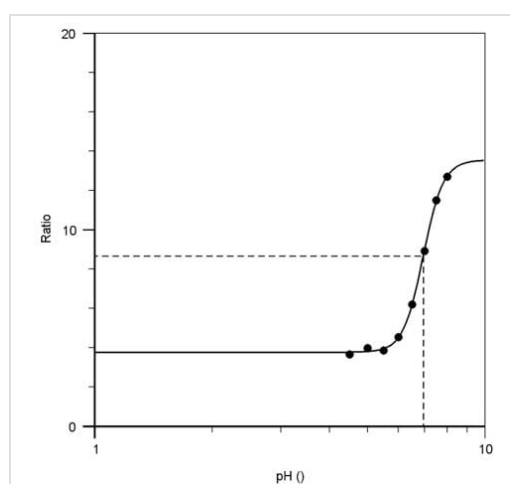
Properties

Storage instructions Store at +4°C. Please refer to protocols.

Components	100 tests
DMSO	1 x 300µl
Nigericin, free acid	1 x 2mg
pH=4.5 Buffer	1 x 10ml
pH=5 Buffer	1 x 10ml
pH=5.5 Buffer	1 x 10ml

Components	100 tests
pH=6 Buffer	1 x 10ml
pH=6.5 Buffer	1 x 10ml
pH=7 Buffer	1 x 10ml
pH=7.5 Buffer	1 x 10ml
pH=8 Buffer	1 x 10ml

Images



Standard curve created using BCFL, AM with Spexyte™ Intracellular pH Calibration Buffer Kit (ab284662)

Standard curve created using BCFL, AM with Spexyte™ Intracellular pH Calibration Buffer Kit (ab284662). HeLa cells were incubated with 5µM BCFL, AM for 30 minutes at room temperature. The Intracellular pH Calibration Buffer Kit was used to clamp the intracellular pH with extracellular buffers at pH 4.5 to 8.0. Intracellular pH vs. relative fluorescence ratio of Ex/Em= 440/ 530 nm and 500 nm/530 nm were plotted and a 4-parameter trendline was fitted to get the pH standard curve.

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