

## PrecisION<sup>®</sup> hASIC3 Recombinant Stable Cell Line

**Catalog Number** CYL3055

**Lot Number**

See Vial

**Contents** 2 Vials, 2 x 10<sup>6</sup> to 4 x 10<sup>6</sup> in 1 mL

### Background Information

Acid-sensing ion channels (ASICs) are structurally related to epithelial sodium channel proteins. They are gated by protons, blocked by amiloride, and their transcripts are localized to sensory ganglia. Their pH sensitivity and distribution makes them interesting candidates to serve as primary transducers of local pH changes during ischemia or tissue injury to pain signals to the CNS. Additional information can be found on page 2.

### Product Information

**Description** Recombinant HEK 293 cell line expressing the human ASIC3 ion channel

**Family** Acid-Sensing-Neuronal Cation, Ligand-Gated

**Target** ASIC3

	Target Protein	Accession Number
1	ASIC3	NM_004769
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A

**Species** Human

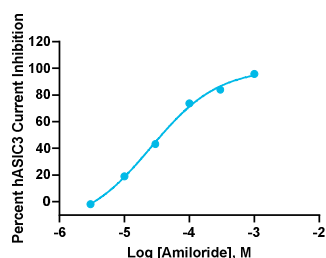
**Host Cell Type** HEK 293

**Application** Electrophysiology assay (conventional and automated patch clamp platforms)

**Storage** Vials are to be stored in vapor phase of liquid nitrogen

### Functional Performance

HEK293 cells expressing hASIC3 were characterized in terms of their pharmacological and biophysical properties using whole-cell patch clamp techniques.



**Electrophysiology Method** IonFlux

**Reference Agonist** pH5.5

**Reference Antagonist** Amiloride

**Antagonist IC<sub>50</sub> (μM)** 25.50

### Passage Stability

This cell line has been confirmed to be stable through at least 12 passages with no significant drop in assay window or change in pharmacology.

### Mycoplasma Testing

This lot was tested and found to be free of mycoplasma contamination. Data available upon request.

### Notes

Additional functional (pharmacological and electrophysiological) validation on multiple platforms is available upon request.

### Additional Ligand Information

**Control Compound** Amiloride

**Vendor Name :** Tocris

**Vendor Catalog No.** 0890

### Additional Background Information

These channels can allow quite large and persistent inward currents in native sensory neurons that can cause sustained firing of action potentials that lead to pain perception. Using the rat ASIC3 sequence de Weille et al. (1998) cloned the human gene encoding ASIC3. During severe cardiac ischemia extracellular pH levels can drop as low as 6.7, and a study of eight different functional properties of large acid-gated currents in rat cardiac afferent neurons corresponded well to ASIC3 channels transfected into COS-7 cells (Sutherland et al., 2001).

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