PrecisION® hTRPV3 Recombinant Stable Cell Line

Catalog Number CYL3065 **Lot Number** See Vial

Contents 2 Vials, 2 x 10^6 to 4 x 10^6 in 1 mL

Background Information

The TRPV3 channel belongs to the transient receptor potential channel (TRP) super-family that consists of 7 subfamilies. The channels exist as tetramers where each subunit consists of 6 putative trans-membrane domains. In this respect they have a similar topology to many other voltage-gated channels. The vast majority are permeable to both monovalent cations and calcium (Clapham et al., 2001). The hTRPV3 channel was first cloned in 2002 by two groups (Xu et al., 2002, Smith et al., 2002) based on its homology to known TRPV channels. Additional information can be found on page 2.

Product Information

Description Recombinant HEK 293 cell line expressing the human TRPV3 ligand-gated ion channel (Transient recetor potential cation channel subfamily V member 3, vanilloid receptor-like 3)

Family TRP

Target TRPV3

	Target Protein	Accession Number
1	TRPV3	AJ487035
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A

Species Human

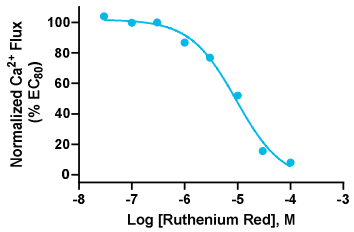
Host Cell Type HEK 293

Application Electrophysiology assay (conventional patch clamp and fluorescent plate-based platforms)

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

Functional Performance

HEK293 cells expressing hTRPV3 were characterized in terms of their pharmacological and biophysical properties using FLIPR calcium assay.



Electrophysiology Method	FLIPR
Reference Agonist	2-APB
Reference Antagonist	Ruthenium Red
Antagonist IC_{50} (μM)	9.42

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	Ruthenium Red
Vendor Name :	Sigma-Aldrich
Vendor Catalog No.	R2751

Additional Background Information

It shares 40-50% homology to TRPV1 (Levine and Alessandri-Haber, 2007) and is activated at temperatures ≥ 34°C as well as by 2-Aminoethoxydiphenyl borate (2-APB, Hu et al., 2004) and monoterpenes such as camphor (Vogt-Eisele et al., 2007). In humans it is expressed in skin keratinocytes, trigeminal ganglia, spinal cord and brain (Xu et al., 2002). It is also located in DRG neurons (Xu et al., 2002, Smith et al., 2002, Facer et al., 2007) where it may even form heteromultimers with TRPV1 (Smith et al., 2002). The specific distribution of this channel, coupled with its thermal sensitivity and potential activation by a variety of inflammatory mediators, have suggested that it may represent a novel drug target for the treatment of inflammatory pain.

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