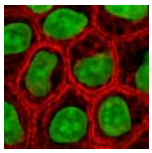

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Research Services

4907 Morena Blvd, Ste 1403
San Diego, CA 92117
www.addexbio.com
Tel: (800) 462-4507
customersupport@addexbio.com

Specification Sheet: HUMAN TRPV1 STABLE CELL LINE

Catalog #: S0017002

Product Name	Human Transient Receptor Potential Channel V1 stable cell line
CHANNEL/RECEPTOR	TRPV1
Catalog #	S0017002
Expression System	CHO-K1 cells
Growth Condition	Details will be shipped with Information Sheet
Subculture	1:2 to 1:3 using 0.25% trypsin or trypsin/EDTA, 5% CO2; 37°C
Freezing	Complete culture medium supplemented with 5% (v/v) DMSO
Morphology and Properties	Adherent epithelium
Gene Name	TRPV1
Sequence	GenBank accession number NM_080706
Mycoplasma Status	Negative (MycoAlert Kit)
Packaging	Cryopreserved cells, 1 x 10^6 cells/vial
Storage Recommendation	Vapor phase of liquid nitrogen
Background	The **transient receptor potential cation channel subfamily V member 1 (TrpV1)**, also known as the **capsaicin receptor** and the **vanilloid receptor 1**, is a protein that, in humans, is encoded by the *TRPV1* gene. It was the first isolated member of the transient receptor potential vanilloid receptor proteins which in turn are a sub family of the transient receptor potential protein group. This protein is a member of the TRPV group of transient receptor potential family of ion channels.
References	Caterina MJ, Schumacher MA, Tominaga M, Rosen TA, Levine JD, Julius D. The capsaicin receptor: a heat-activated ion channel in the pain pathway. *Nature* 1997;389 (6653): 816–824. Xue Q, Yu Y, Trilk SL, Jong BE, Schumacher MA. The genomic organization of the gene encoding the vanilloid receptor: evidence for multiple splice variants. *Genomics* 2001; 76 (1-3): 14–20.

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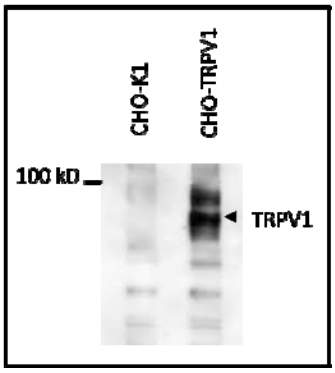
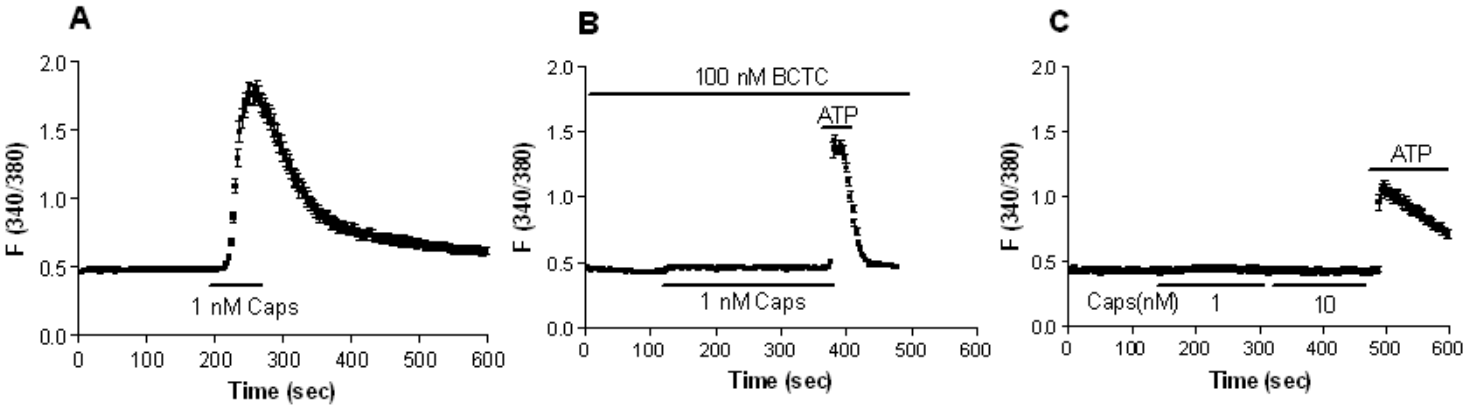
Validation Data



TRPV1 expression in stable cell line. Western blot analysis of total cell lysates of CHO-K1 or CHO-TRPV1 cells. PVDF were probed with the anti-TRPV1. n=3



Functional validation of TRPV1 overexpression in CHO-K1 cells. CHO cells grown on coverslips were loaded with a specific Ca^{2+} indicator, fura-2 AM, and then cytosolic free Ca^{2+} concentration ($[Ca^{2+}]_{cyt}$) in single cells was measured with a digital Ca^{2+} imaging system. **A.** Capsaicin (Caps, 1 nM) induced a significant $[Ca^{2+}]_{cyt}$ elevation in TRPV1 cell line perfused with normal physiological salt solution. **B.** BCTC (100 nM) specifically prevented capsaicin-induced, but not ATP (10 uM)-induced $[Ca^{2+}]_{cyt}$ elevation in TRPV1 cell line. **C.** ATP (10 uM), but not capsaicin (1 or 10 nM), induced $[Ca^{2+}]_{cyt}$ elevation in control CHO-K1 cells. N =50 cells for each group.