

Cav1.2 Assay Data Sheet

Channel	Cav1.2/ β 2/ α 2/ δ 1, L-type
Catalog Ref.	ICE-CHO-Cav1.2
Gene	CACNA1C/CACNB2/CACNA2D1
Sources	human
Expression system	CHO
Method	whole cell patch clamp
Standard time	2-4 weeks
Reference Inhibitor	Nifedipine, verapamil
Target	Timothy syndrome, long QT syndrome, Pain, epilepsy, hypertension, stroke, arrhythmia, Autism

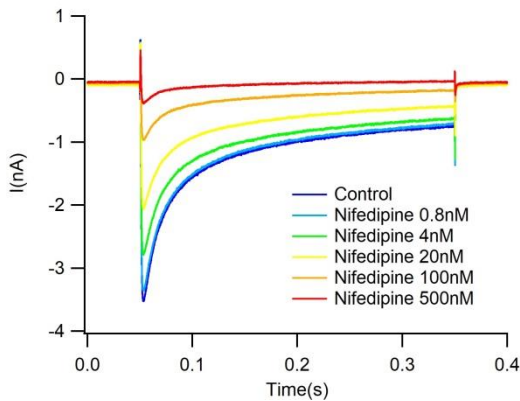


Figure 1. Representative traces of Cav1.2 currents, before and after Nifedipine application at different concentrations

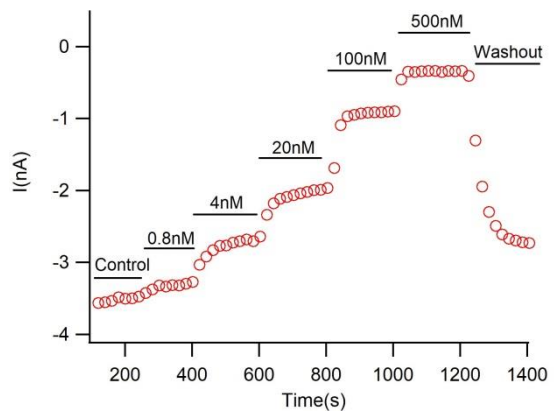


Figure 2. The time course of Cav1.2 currents after application of different Nifedipine concentrations

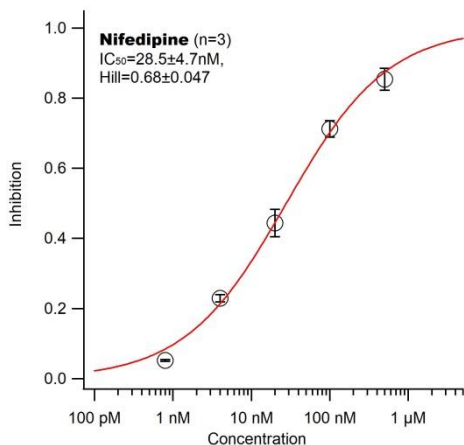


Figure 3. Concentration-dependent effect of Nifedipine on Cav1.2 currents

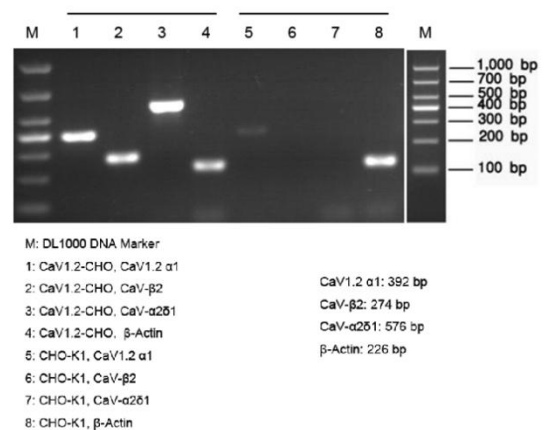


Figure 4. Expression of Cav2.1 mRNA in the stable cell line

Further validation data available on request.

Cav2.1 Assay Data Sheet

Channel	Cav2.1
Catalog Ref.	ICE-CHO-Cav2.1
Gene	CACNA1A
Sources	human
Expression system	CHO
Method	whole cell patch clamp
Standard time	2 weeks (<10cpds)
Reference inhibitor	Cadmium ($2.9 \pm 0.658\mu\text{M}$)
Target	migraine, seizure and ataxia syndromes

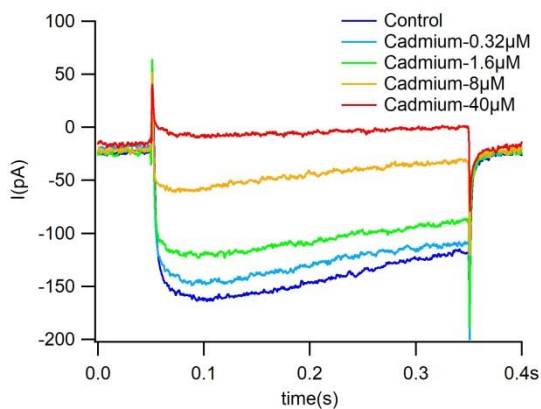


Figure 1. Representative traces of Cav2.1 currents, before and after Cadmium application at different concentrations

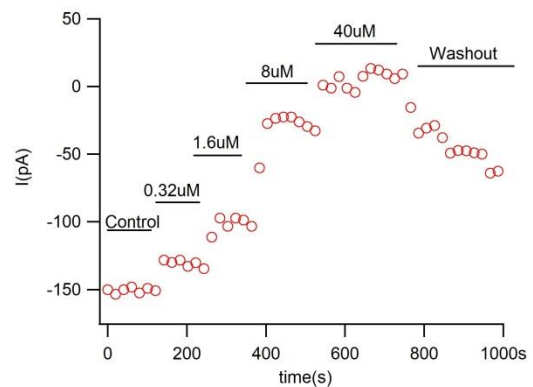


Figure 2. The time course of Cav2.1 currents after application of different Cadmium concentrations

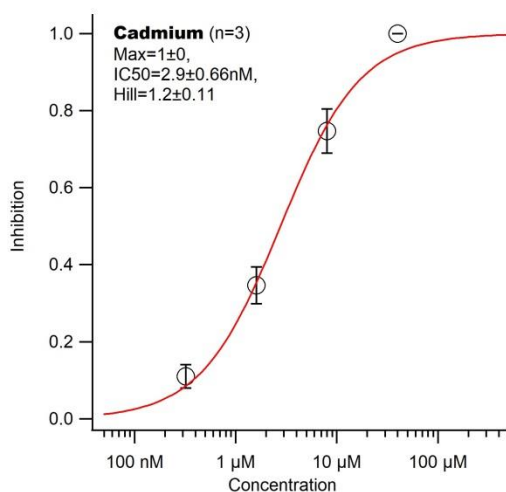


Figure 3. Concentration-dependent effect of Cadmium on Cav2.1 currents

Further validation data available on request.

Cav2.2 Assay Data Sheet

Channel	Cav2.2/ β 3/ α 2 δ 1, N-type
Catalog Ref.	ICE-CHO-Cav2.2
Gene	CACNA1B
Sources	human
Expression system	CHO
Method	whole cell patch clamp
Standard time	2 weeks (<10cpds)
Reference compound	Nifedipine, verapamil, Cadmium (IC ₅₀ =7.0 μ m ± 704nM)
Target	Pain, Spinal cord injury, Kleefstra syndrome

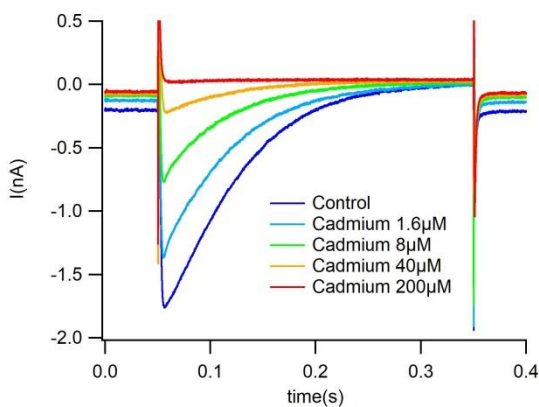


Figure 1. Representative traces of Cav2.2 currents, before and after Cadmium application at different concentrations

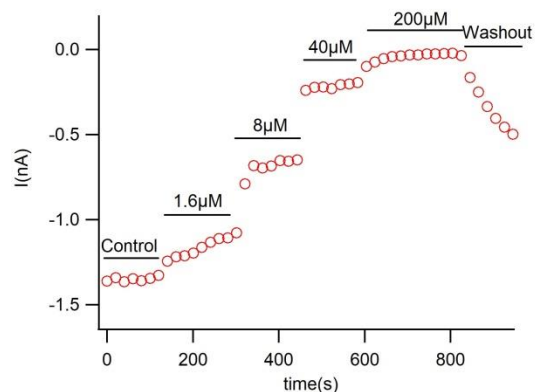


Figure 2. The time course of Cav2.2 currents after application of different Cadmium concentrations

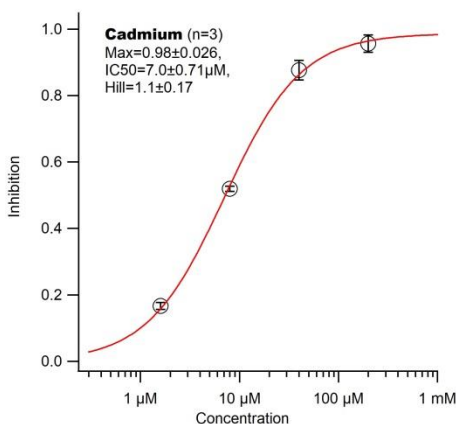
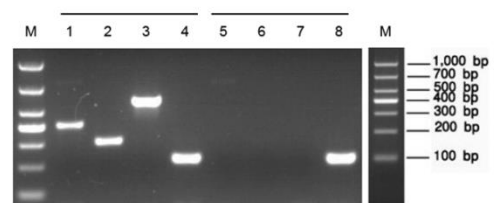


Figure 3. Concentration-dependent effect of Cadmium on Cav2.2 currents



M: DL1000 DNA Marker
 1: Cav2.2-CHO, CaV2.2 α 1
 2: Cav2.2-CHO, CaV- β 3
 3: Cav2.2-CHO, CaV- α 2 δ 1
 4: Cav2.2-CHO, β -Actin
 5: CHO-K1, CaV2.2 α 1
 6: CHO-K1, CaV- β 3
 7: CHO-K1, CaV- α 2 δ 1
 8: CHO-K1, β -Actin

CaV2.2 α 1: 400 bp
 CaV- β 3: 305 bp
 CaV- α 2 δ 1: 576 bp
 β -Actin: 226 bp

Figure 4. Expression of Cav2.2 mRNA in the stable cell line

Further validation data available on request.

Cav3.2 Assay Data Sheet

Channel	CaV3.2, T-type
Catalog Ref.	ICE-CHO-Cav3.2
Gene	CACNA1H
Sources	human
Expression system	HEK293
Method	whole cell patch clamp
Standard time	2-4 weeks
Reference compound	mibefradil, NiCl ₂
Target	Convulsion

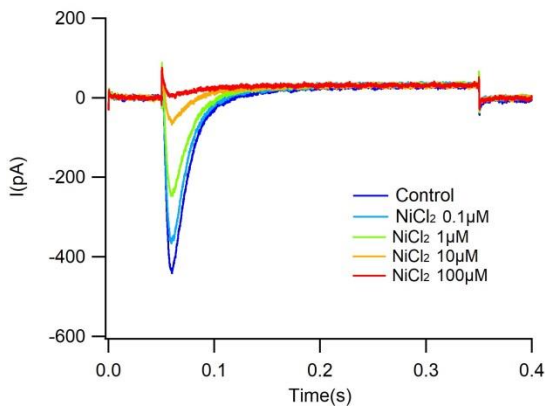


Figure 1. Representative traces of Cav3.2 currents, before and after NiCl₂ application at different concentrations

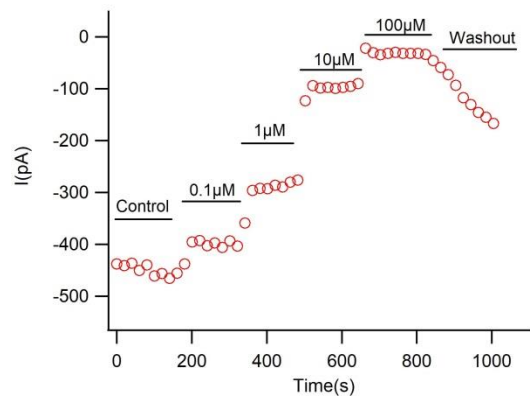


Figure 2. The time course of Cav3.2 currents after application of different NiCl₂ concentrations

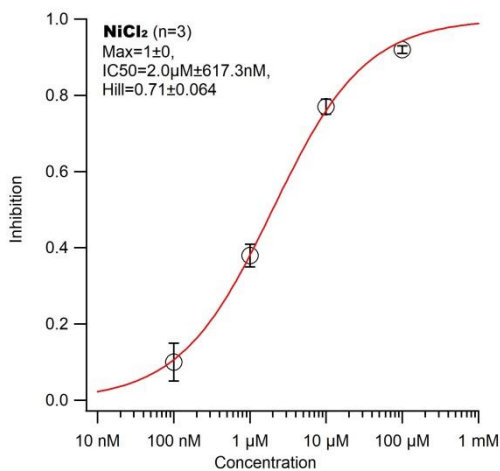


Figure 3. Concentration-dependent effect of NiCl₂ on Cav3.2 currents

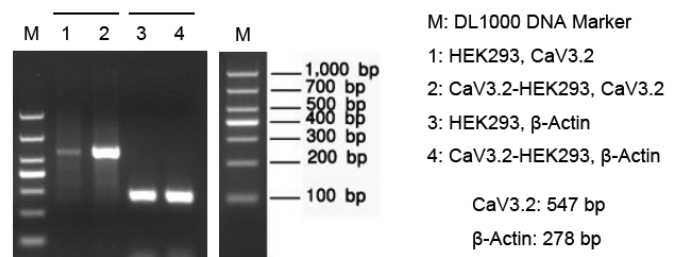


Figure 4. Expression of Cav3.2 mRNA in the stable cell line

Further validation data available on request.