

## Human Protocadherin-10 (PCDH10) Stable Cell Line

CATALOG NUMBER: CL-PCDH10-01

### Introduction

The human protocadherin-10 (PCDH10) is a member of the cadherin superfamily, involved in calcium-dependent cell-cell adhesion and neural development. Recent studies have validated PCDH10 as a functional entry receptor for Western Equine Encephalitis Virus (WEEV), directly mediating viral attachment and facilitating host cell entry. This receptor-virus interaction defines WEEV tropism and positions PCDH10 as a strategic target for antiviral drug development and mechanistic studies of alphavirus pathogenesis.

### Description

This stable HEK293 cell line has been genetically engineered to express recombinant human PCDH10 (GenBank Accession No. NP\_116586.1), localized to the cell surface. Functional validation was performed using WEEV pseudoviral particles, confirming receptor-mediated viral entry and suitability for virus-host interaction studies.

### Applications

- High-throughput screening of human PCDH10 antagonists
- Mechanistic studies of WEEV entry and pathogenesis

### Functional Validation

- **Assay performed:**
  - RT-qPCR for VLDLR transcript expression
  - Pseudovirus infection assay using EEEV particles
- **Post-thaw viability:** >2.5 million viable cells per vial on Day 2
- **Mycoplasma status:** Negative (tested and confirmed free of contamination)

### Product Contents

- Stable VLDLR-expressing cells: 1 mL ( $2 \times 10^6$  cells/mL) in DMEM, 10% FBS, 10% DMSO

### Growth & Culture Conditions

- Cell type: Adherent
- Growth medium: 90%DMEM+10%FBS+1 ug/mL puromycin
- Freezing medium: 90% complete growth medium + 10% DMSO

### Storage Instructions

Upon receipt, immediately transfer the vial to a storage temperature below -130°C, preferably in liquid nitrogen vapor phase, Avoid repeated freeze-thaw cycles.



**Recommended Cell Infection Assay Protocol****1. Cell Seeding:**

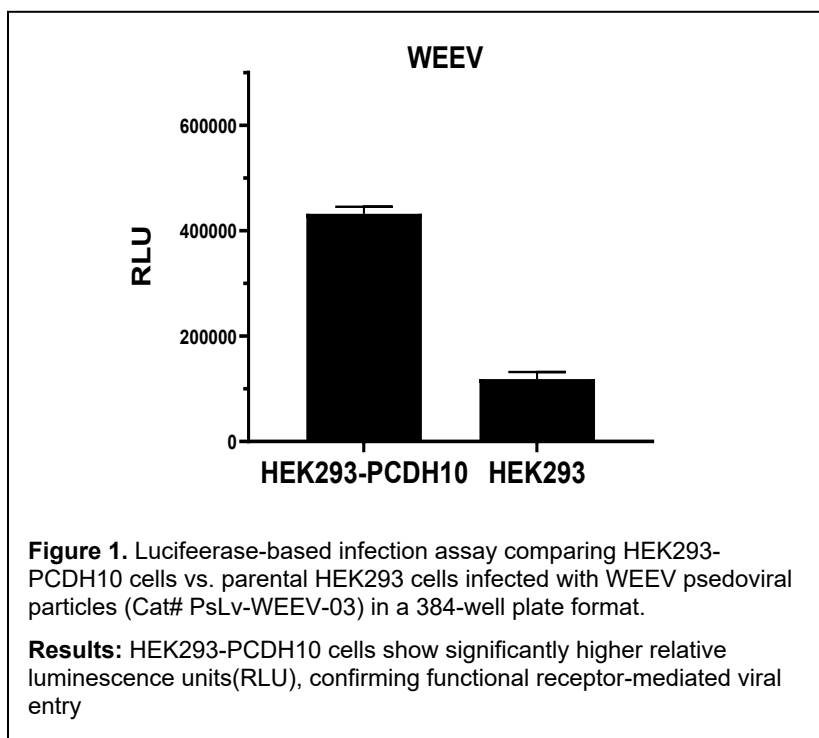
- Seed ~20,000 PCDH10 or HEK293 cells per well in 96-well plates (50  $\mu$ L/well)
- Alternatively, seed ~5,000 cells per well in 384-well plates (12.5  $\mu$ L/well)
- Use DMEN + 10% HyClone™ FetalClone™ II Serum (no antibiotics)

**2. Infection:**

- Add 50  $\mu$ L pseudoviral particles per well (12.5  $\mu$ L for 384-well)
- Centrifuge at 700 rpm for 15 min at 4 °C
- Incubate for 72 hrs at 37°C

**3. Luciferase Activity Measurement:**

- Optional: Remove medium for cleaner signal (higher RLU if medium is retained)
- Add 100  $\mu$ L luciferase assay reagent (25  $\mu$ L for 384-well)
- Read luminescence using BioTek Synergy 2 plate reader

**Functional Assay Data****Restriction**

This cell line is not allowed to be transferred to other laboratory or other company. For purchasing this cell line, please contact eEnzyme LLC at [info@eEnzyme.com](mailto:info@eEnzyme.com), Telephone: +1 (240) 683 5851, FAX: +1 (240) 683 5852

