

# CLEFF4 cell line

**Catalogue number:** 157847

**Sub-type:**

**Images:**

## Contributor

**Inventor:** Andrew Crowe

**Institute:** Curtin University

**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** CLEFF4 cell line

**Alternate name:**

**Class:**

**Conjugate:**

**Description:** Pharmaceutical drug development requires drug targets to be characterised against efflux transporters. An example is P-glycoprotein (P-gp) which prevents the uptake and trans-cellular transport of hundreds of drug groups. The standard model is to use Caco-2 cells as these can be induced to express high concentrations of P-gp. Said tight junction model can approximate the role of P-gp at the barrier sites in the body including the gastrointestinal tract and also the blood-brain-barrier. There are however limitations to the Caco-2 cell line, including taking 24 days to develop the characteristics required for P-gp-mediated efflux modelling. Further, other efflux proteins including BCRP and MRP2 are often present in Caco-2 cells, which add extra variables when characterising specific P-gp mediated effects. The CLEFF4 cell line is ready to use in just 5 days and has a 3-fold higher expression of P-gp cells at 5-7 days compared to Caco-2 cells at day 21, expressing no more MRP2 and less BCRP than the parent Caco-2 cells. This is a faster, more specific model for P-gp assays offering cost and time savings and which has reduced medium requirement (one can use standard not accelerated media).

**Purpose:**

**Parental cell:** Caco-2

**Organism:** Human

**Tissue:** Colon

**Model:** Mutant

**Gender:**

**Isotype:**

**Reactivity:**

**Selectivity:**

**Host:**  
**Immunogen:**  
**Immunogen UNIPROT ID:**  
**Sequence:**  
**Growth properties:**  
**Production details:**  
**Formulation:**  
**Recommended controls:**  
**Bacterial resistance:**  
**Selectable markers:**  
**Additional notes:**

## Target details

**Target:** CLEFF4

**Target alternate names:**

**Target background:**

**Molecular weight:**

**Ic50:**

## Applications

**Application:**

**Application notes:**

## Handling

**Format:** Frozen

**Concentration:**

**Passage number:**

**Growth medium:**

**Temperature:**

**Atmosphere:**

**Volume:**

**Storage medium:**

**Storage buffer:**

**Storage conditions:**

**Shipping conditions:** Dry ice

## Related tools

**Related tools:**

## References

**References:** Marion et al. 1997. Methods. 11(1):3-11. PMID: 8990083. ; Tillman et al. 1992. J Exp Med. 176(3):761-79. PMID: 1512540. ; Marion et al. 1982. J Immunol. 128(2):668-74. PMID: 7198664.

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