Product Description

This is a stably transduced CHO-K1 cell line expressing human GPR17, developed for functional GPCR screening. GPR17 is a member of the Class A GPCR family and has been linked to neuroinflammation, myelination, and tissue repair processes. It has dual characteristics of both purinergic and cysteinyl leukotriene receptors. The cell line co-expresses AEQ-GFP (aequorin-GFP) and Gα16, enabling detection of receptor activity via calcium-sensitive chemiluminescence.

Key Features

- Stable expression of human GPR17 confirmed by RT-PCR
- Co-expression of AEQ-GFP and Gα16
- Suitable for ligand screening and GPCR signaling research
- Compatible with high-throughput screening platforms
- Delivered mycoplasma-free, with Certificate of Analysis and QC report

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Assay Protocol (Summary)

1. Plate GPR17-CHO cells in a 96-well plate at ~40,000 cells/well
2. Incubate overnight at 37°C, 5% CO_2
3. Load cells with 2.5 μM coelenterazine for 3 hours in the dark
4. Replace with fresh assay buffer
5. Add test compound or vehicle
6. Measure light emission using a plate reader (integration: 1–5 sec per well)
7. Analyze calcium mobilization as a functional readout of GPR17 activation

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Putative Ligands

- UDP-glucose, UDP-galactose
- Cysteinyl leukotrienes (LTC4, LTD4)
- Proposed ligands involved in oligodendrocyte maturation and inflammation

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Storage and Stability

- Shipped on dry ice
- Store in liquid nitrogen vapor phase upon arrival
- Stable for >20 passages under recommended conditions

Recommended Culture Conditions

- Medium: F12K + 10% FBS + 1% Pen/Strep
- Selection antibiotics (if required): Puromycin (1–2 μg/mL)
- Subculture ratio: 1:6 to 1:10 every 3–4 days

Applications

- Functional analysis of neuroinflammatory and remyelination pathways
- Drug discovery for CNS repair and demyelinating diseases
- High-content phenotypic profiling
- Basic research in GPCR signaling mechanisms