

Cellul'erk

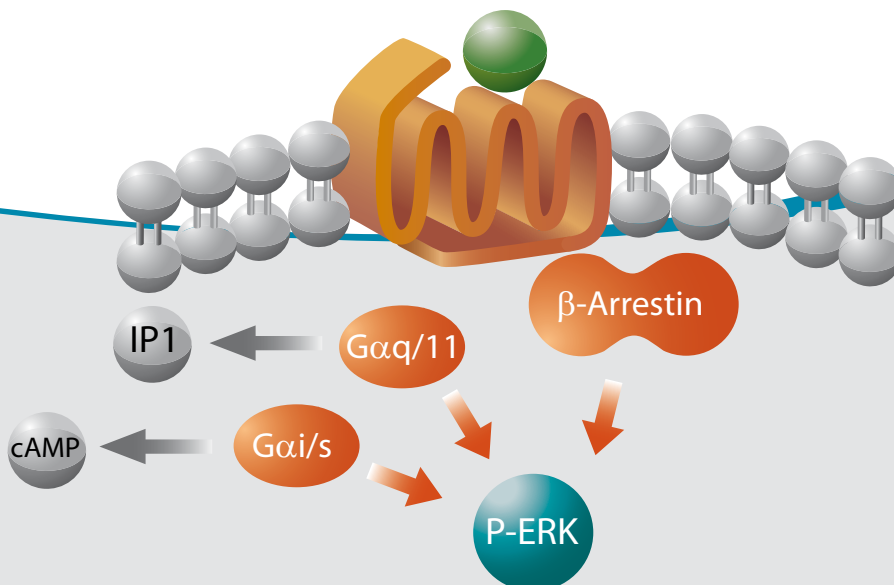
The HTRF[®] Phospho-ERK assay for GPCR and MAPK screening

Homogeneous, antibody based solution for the rapid detection of activated ERK1/2 in cells

- A functional readout for GPCR investigation with HTRF quality
- Amenable to 384-well low-volume format
- Cell-based high-throughput assay
- Simple and rapid alternative to Western blot or ELISA
- For over-expressed and endogeneous receptors

Applications:

- Gi, Gs, Gq coupled receptor activation
- Mitogen-activated protein kinase (MAPK) pathway (RTKs activity)
- β -Arrestin signaling



HTRF based assay for ERK1/2

GPCRs act via G proteins to regulate a wide range of cellular functions.

Upon stimulation

- these receptors activate effectors like adenylyl cyclase and phospholipase C that influence intracellular concentrations of second messengers: cyclic AMP, diacylglycerol, inositol 1,4,5 trisphosphate and Ca²⁺
- and also mediate G α i/o, G α s, G α q/11, and G α 12/13 dependant activation of the MAPK cascade, including ERK cascade.

In addition, both α and $\beta\gamma$ subunits of G proteins can stimulate ERK1/2 phosphorylation

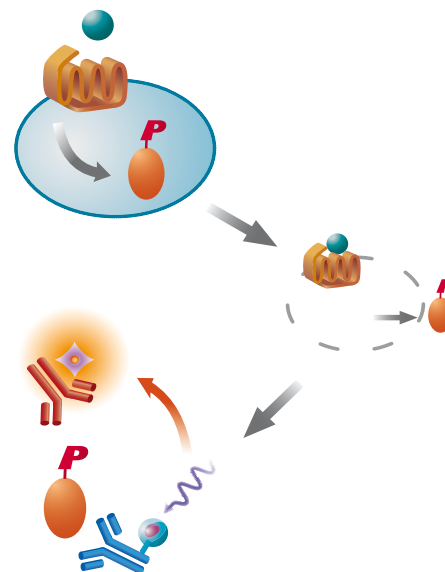
- through transactivation of receptor tyrosine kinases (RTKs)
- GPCRs have also been shown to mediate ERK1/2 activation in a G protein-independent, but β -arrestin dependent manner.

Assay description

The assay is performed directly on living cells in two steps

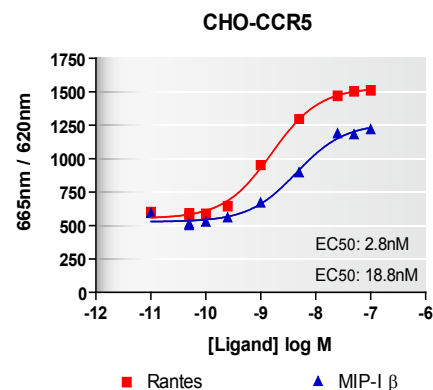
1. GPCR stimulation with ligand followed by the lysis of the cells.
2. Detection of the phosphorylated ERK1/2 with HTRF reagents.

Phosphorylated ERK1/2 is sandwiched between an anti-phospho-ERK1/2 Ab labeled with d2 and an anti-ERK1/2 Ab labeled with Eu³⁺-cryptate and incubated for two hours at room temperature.



Assay in action

To validate Cellul'ERK for detection of Phospho-ERK1/2, CHO-CCR5 (25,000 cells/well) was stimulated with Rantes and MIP-1 β for 10' at Room temperature.



Ordering information

Reference	Size
64ERKPEF	200 tests
64ERKPEG	500 tests
64ERKPEH	10,000 tests
64ERKPEI	50,000 tests

Visit our website for companion products.

Related information

Web: <http://www.htrf.com/products/ERK>

HTRF is a patented technology and a registered trademark of CIS bio international

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