REF: P30700

β-SECRETASE EXPRESSION ASSAY KIT

HUMAN tGFP-BACE1 HEK293 CELL LINE

Product Name:	tGFP-BACE1 HEK293 Stable Cell line
Catalog Number:	P30700
Cell Type:	HEK293
Fluorescent Protein:	tGFP-BACE1
Format:	5 x 10^6 cells in Cryopreserved vials
Storage:	Liquid Nitrogen

A novel HEK293/tGFP-BACE cell line has been developed through stable transfection for monitoring the expression of β-secretase in cell-based assays. HEK293/tGFP-BACE cell line was obtained by transfection of an expression vector for a fusion protein of turboGFP and human BACE, as well as G418 into HEK cells with Evrogen TurboGFP. Cells were then grown in the presence G418. Single cells with strong green fluorescence were selected by flow cytometry, and allowed to expand. These cells constitutively express the tGFP-BACE fusion protein.

About TurboGFP

TurboGFP is an improved variant of the green fluorescent protein CopGFP cloned from copepod *Pontellina plumata* (Arthropoda; Crustacea; Maxillopoda; Copepoda) [Shagin et al., 2004]. It possesses bright green fluorescence (excitation/ emission max = 482/ 502 nm) that is visible earlier than fluorescence of other green fluorescent proteins.

About BACE1

Accession No.: NM_012104

Homo sapiens beta-site APP-cleaving enzyme 1 (BACE1), transcript variant a.

BACE1 or β-secretase is an aspartic-acid protease important in the pathogenesis of Alzheimer's disease, cleaving the amyloid precursor protein (APP) as part of the generation of the 40 or 42 amino acid-long amyloid-β peptides that aggregate in the brain of Alzheimer's patients. Cerebral deposition of amyloid beta peptide is an early and critical feature of Alzheimer's disease. Amyloid beta peptide is generated by proteolytic cleavage of amyloid precursor protein (APP) by two proteases, one of which is the protein encoded by this gene. The encoded protein, a member of the peptidase A1 protein family, is a type I integral membrane glycoprotein and aspartic protease that is found mainly in the Golgi. Four transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq].

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Assay details

Recombinant HEK293 cells stably expressing human beta secretase (BACE1) fused to the turbo green fluorescent protein (tGFP). The β-Secretase Expression Assay Kit is designed to assay for compounds that inhibit the production of β-secretase by quantifying the fluorescence by accumulation of tGFP-BACE1 in the cytoplasm

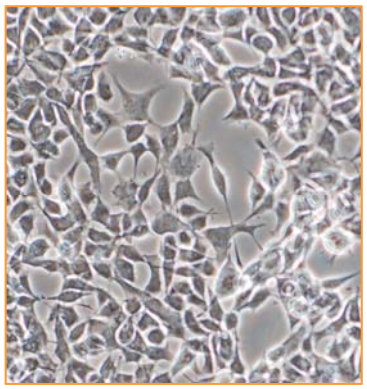
Quantification

tGFP-BACE can be imaged on most fluorescent microplate readers, HCS platforms or fluorescence microscopes.

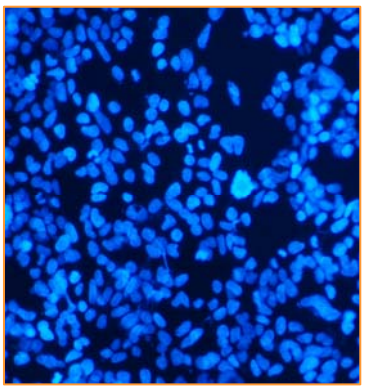
Quality Control

All cells are performance assayed and test negative for mycoplasma, bacteria, yeast and fungi. Cell viability, morphology and proliferative capacity are measured after recovery from cryopreservation. Innoprot guarantees stable expression for many generations and provides support for cell culture and visualization.

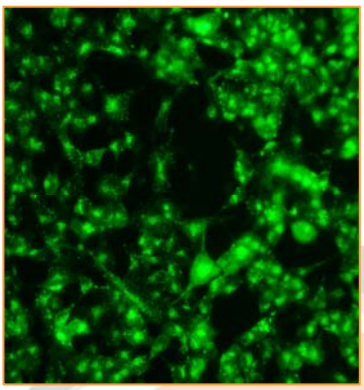
tGFP-BACE HEK293 Cells



HEK293 BACE-tGFP cells culture image by phase contrast microscopy



Nuclear DAPI staining of HEK293 BACE-tGFP cells culture image by epifluorescence microscopy



Fluorescent tGFP-BACE HEK293 cells culture image by epifluorescence microscopy

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