

CSF1R/SRE-Luc/HEK293

CBP74010

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I. Background

Colony Stimulating Factor 1 Receptor (CSF1R, CD115, M-CSF-R) is the receptor for the cytokine CSF1 (MCSF; CSF-1), which controls the growth, function, and differentiation of macrophages. This interaction drives the development and survival of Tumor-Associated Macrophages (TAMs), which in turn suppress the local immune response to the cancer. An alternative ligand is IL-34, which has been implicated in neuroprotective and survival signals following brain injury and neurodegeneration.

As a tyrosine kinase transmembrane receptor, activation of CSF1R by its ligand initiates a vast array of intracellular activity, including activation of the MAPK/ERK signaling pathway. When phosphorylated by ERK, Elk1 forms a complex with Serum Response Factor (SRF) and binds to Serum Response Element (SRE), resulting in the expression of numerous mitogen-inducible genes.

II. Introduction

Host Cell: HEK293



Expressed gene: CFS1R-SRE-Luciferase

Stability: 32 passages (in-house test, that not means the cell line will be instable beyond the passages we tested.)

Synonym(s): FMS,CD115

Freeze Medium: 90% FBS+10% DMSO

Culture Medium: DMEM +10%FBS+200ug/ml hygromycin+1ug/ml puromycin

Mycoplasma Testing: Negative

Storage: Liquid nitrogen

Application(s): Functional(Report Gene) Assay

III. Description of Host Cell Line

Organism: Human

Tissue: Embryonic kidney

Disease: Normal

Morphology: Epitheloid

Growth Properties: Adherent

IV. Representative Data



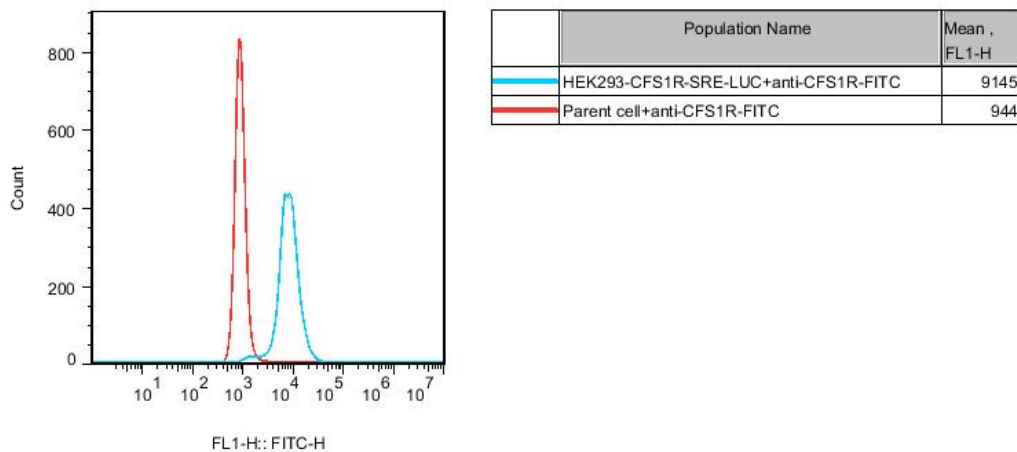


Figure 1. Recombinant HEK293 cell line expressing firefly luciferase gene under the control of SRE response elements with constitutive expression of CSF1R(Colony Stimulating Factor 1 Receptor).

Dose Response of CSF1R / SRE Reporter – HEK293 cell line to CSF1

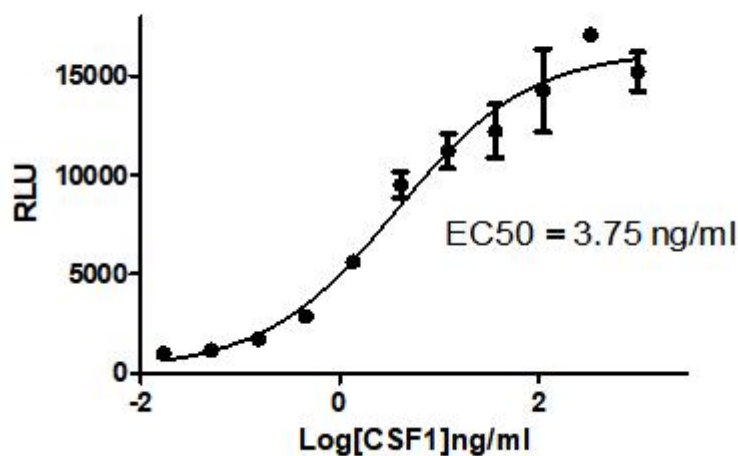


Figure 2. Detect Luciferase assay by Ultra Luciferase Detection Kit CBPH0001 (we strongly suggest to purchase from Cobioer). HEK293/CFS1R-SRE Luciferase Reporter cells were stimulated by CSF1, the EC50 was 3.75ng/ml.



Inhibition of CSF1 (100 ng/ml) -induced SRE reporter activity by CSF1R inhibitors

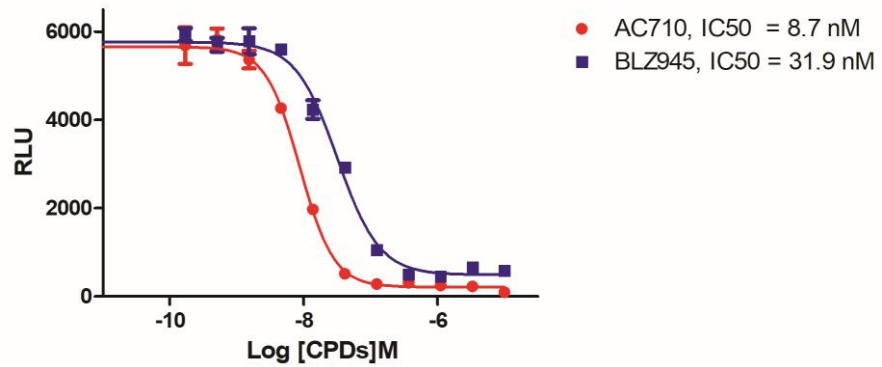


Figure 3. Inhibition of CSF1 (100 ng/ml) -induced SRE reporter activity by CSF1R inhibitors.

