

PrecisION[®] hGlyRA1 Recombinant Stable Cell Line

Catalog Number CYL3056

Lot Number

See Vial

Contents 2 Vials, 2 x 10⁶ to 4 x 10⁶ in 1 mL

Background Information

Inhibitory neurotransmission in the mammalian CNS is mainly mediated by the amino acids GABA and glycine. GABA receptors constitute major targets of widely used drugs such as barbiturates and benzodiazepines, whereas clinically applicable compounds that target GlyRs have yet to be identified. Glycine levels are highest in the brainstem and spinal cord where GlyRs are involved with the control of motor rhythm generation, the coordination of spinal responses and the processing of sensory signals. Additional information can be found on page 2.

Product Information

Description Recombinant HEK 293 cell line expressing the human GlyRA1 (glycine receptor, alpha 1) chloride ion channel

Family Chloride, Ligand-Gated

Target GlyRA1

	Target Protein	Accession Number
1	GlyRA1	NM_000171
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A

Species Human

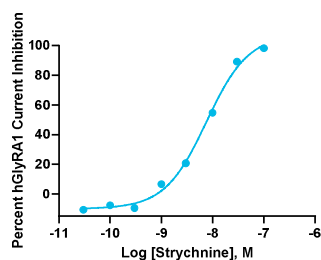
Host Cell Type HEK 293

Application Electrophysiology assay (conventional and automated patch clamp platforms)

Storage Vials are to be stored in vapor phase of liquid nitrogen

Functional Performance

HEK293 cells expressing hGlyRA1 were characterized in terms of their pharmacological and biophysical properties using whole-cell patch clamp techniques.



Electrophysiology Method IonFlux

Reference Agonist Glycine

Reference Antagonist Strychnine

Antagonist IC₅₀ (μM) 0.01

Passage Stability

This cell line has been confirmed to be stable through at least 12 passages with no significant drop in assay window or change in pharmacology.

Mycoplasma Testing

This lot was tested and found to be free of mycoplasma contamination. Data available upon request.

Notes

Additional functional (pharmacological and electrophysiological) validation on multiple platforms is available upon request.

Additional Ligand Information

Control Compound Strychnine

Vendor Name : Sigma-Aldrich

Vendor Catalog No. S8573

Additional Background Information

A disruption GlyR surface expression, or by reducing the ability of expressed GlyRs to conduct chloride ions, results in the rare neurological disorder, hyperekplexia. The disorder is characterized by an exaggerated response to unexpected stimuli which is followed by a temporary but complete muscular rigidity often resulting in an unprotected fall. Chronic injuries as a result of the falls are symptomatic of the disorder. A mutation in GLRA1 is responsible for some cases of stiff person syndrome.

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