Data Sheet (Cat.No.T76680)

TargetMol

Fremanezumab

Chemical Properties

CAS No. : 1655501-53-3

Formula:

Molecular Weight: 145.49 kDa

Storage: Store at low temperature
Store at -20°C
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Fremanezumab (TEV-48125) is a humanised monoclonal antibody targeting CGRP, capable of neutralising human (IC50=7.94 nM), mouse (IC50=19.6 nM) and rat CGRP, and is indicated for the prevention of migraine. Fremanezumab inhibits CGRP's vasodilatory effects in the basilar artery constriction segment and suppresses activation of A-δ and high-threshold (HT) neurons in the meningeal nociceptive system triggered by cortical spreading depression (CSD) in rats. In vitro, Fremanezumab counteracts CGRP's immunosuppressive effects on microglia and lymphocytes.
Targets(IC50)	CGRP Receptor
In vitro	Fremanezumab, when incubated at a concentration of 10 μM for 6 hours, can reverse the concentration-dependent inhibitory effect of CGRP on the transcription of IL1β, IL6, and IL12 in primary cultures of microglia from C57Bl mice induced by LPS; under conditions of LPS incubation alone, Fremanezumab did not alter the activation state of microglia [1]. After 72 hours of Fremanezumab treatment, it prevented the phenomenon of CGRP inhibiting the proliferation of NOD-derived splenocytes immunized with MOG35-55 on day 30 in mice, while having no effect on lymphocyte proliferation when acting alone [1]. At doses of 1-100 ng and a treatment duration of 1 hour, Fremanezumab reduced the immunodetection of homo sapiens and murine CGRP, with IC50 values for homo sapiens CGRP and murine CGRP being 7.94 nM and 19.6 nM, respectively [1]. Within the concentration range of 0.00001-1 μM, Fremanezumab significantly inhibited the vasodilatory effects induced by homo sapiens αCGRP, murine αCGRP, and the metabolically stable CGRP analog SAX in rat basilar artery segments, and reduced the pEC50 of CGRP from 8.0 to 6.3 and that of SAX from 7.2 to 6.3 [2].
In vivo	In NOD mice, subcutaneous administration of 100 mg/kg Fremanezumab once every two weeks showed no significant effects on disease progression, survival rate, spinal cord neurodegenerative changes, or innate and adaptive immune responses[1]. In anesthetized male rats, a single intravenous injection of 30 mg/kg Fremanezumab selectively suppressed the activation of Aδ meningeal nociceptors induced by cortical spreading depression (CSD)[3].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.0069 mL	0.0344 mL	0.0687 mL
5 mM	0.0014 mL	0.0069 mL	0.0137 mL
10 mM	0.0007 mL	0.0034 mL	0.0069 mL
50 mM	0.0001 mL	0.0007 mL	0.0014 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.