

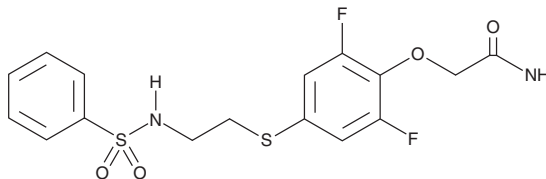
# PRODUCT INFORMATION



## PEPA

Item No. 29190

**CAS Registry No.:** 141286-78-4  
**Formal Name:** 2-[2,6-difluoro-4-[[2-(phenylsulfonyl)amino]ethyl]thio]phenoxy]-acetamide  
**MF:** C<sub>16</sub>H<sub>16</sub>F<sub>2</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub>  
**FW:** 402.4  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 258 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

PEPA is supplied as a crystalline solid. A stock solution may be made by dissolving the PEPA in the solvent of choice, which should be purged with an inert gas. PEPA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PEPA in ethanol is approximately 3 mg/ml and approximately 30 mg/ml in DMSO and DMF.

PEPA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PEPA should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PEPA has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

PEPA is a positive allosteric modulator (PAM) of AMPA receptors.<sup>1</sup> It selectively increases glutamate-induced currents in *X. laevis* oocytes expressing the flop isoforms of the AMPA receptor subunits glutamate receptor 3 (GluR3) and GluR4 over the flip isoforms of these subunits at 200 μM. PEPA (10 mg/kg) decreases the latency to find the platform in the Morris water maze, indicating reversal of memory deficits, in a rat model of memory impairment induced by middle cerebral artery occlusion (MCAO).<sup>2</sup> It decreases freezing time in a contextual fear freezing paradigm in mice when administered at a dose of 30 mg/kg.<sup>3</sup>

### References

1. Sekiguchi, M., Fleck, M.W., Mayer, M.L., *et al.* A novel allosteric potentiator of AMPA receptors: 4-[2-(phenylsulfonylamino)ethylthio]-2,6-difluoro-phenoxyacetamide. *J. Neurosci.* **17(15)**, 5760-5771 (1997).
2. Sekiguchi, M., Yamada, K., Jin, J., *et al.* The AMPA receptor allosteric potentiator PEPA ameliorates post-ischemic memory impairment. *Neuroreport* **12(13)**, 2947-29950 (2001).
3. Zushida, K., Sakurai, M., Wada, K., *et al.* Facilitation of extinction learning for contextual fear memory by PEPA: A potentiator of AMPA receptors. *J. Neurosci.* **27(1)**, 158-166 (2007).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM