# **PRODUCT** INFORMATION



## Basmisanil

Item No. 21137

CAS Registry No.:	1159600-41-5	
Formal Name:	(1,1-dioxido-4-thiomorpholinyl)	F
	[6-[[3-(4-fluorophenyl)-5-methyl-4-isoxazolyl] methoxy]-3-pyridinyl]-methanone	
Synonym:	RG-1662	
MF:	C <sub>21</sub> H <sub>20</sub> FN <sub>3</sub> O <sub>5</sub> S	Ő O
FW:	445.5	
Purity:	≥95%	
UV/Vis.:	λ <sub>max</sub> : 233 nm	
Supplied as:	A crystalline solid	$\sim \downarrow \sim$
Storage:	-20°C	Ô
Stability:	≥4 years	

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

#### Laboratory Procedures

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

#### Description

Basmisanil is a negative allosteric modulator of  $\alpha_5$  subunit-containing GABA<sub>A</sub> receptors (K<sub>i</sub> = 0.005  $\mu$ M in HEK293 cells expressing the human  $\alpha_5\beta_3\gamma_2$  subunit-containing GABA<sub>A</sub> receptor).<sup>1</sup> It selectively binds to  $\alpha_5$ over  $\alpha_1$ ,  $\alpha_2$ , or  $\alpha_3$  subunit-containing  $\tilde{GABA}_A$  receptors (K<sub>i</sub>s = 1.031, 0.458, and 0.51  $\mu$ M, respectively) as well as a panel of 78 receptors, transporters, and ion channels at 10  $\mu$ M. Basmisanil inhibits GABA-induced currents in Xenopus oocytes expressing the human  $\alpha_5\beta_3\gamma_2$  subunit-containing GABA<sub>A</sub> receptor (IC<sub>50</sub> = 0.008  $\mu$ M), an effect that can be blocked by flumazenil (Item No. 14252). It reverses diazepam-induced cognitive impairments in rats in the Morris water maze when administered at a dose of 10 mg/kg.

#### References

1. Hipp, J.F., Knoflach, F., Comley, R., et al. Basmisanil, a highly selective  $GABA_{\Lambda}-\alpha_{5}$  negative allosteric modulator: Preclinical pharmacology and demonstration of functional target engagement in man. Sci. Rep. 11(1), 7700 (2021).

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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