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- Trockeneiszuschlag
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- Expressversand

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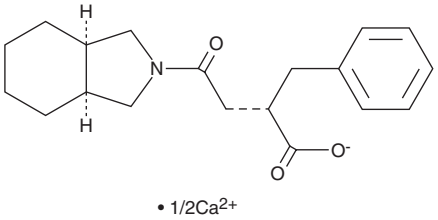
PRODUCT INFORMATION

Mitiglinide (calcium salt)

Item No. 30693

CAS Registry No.:	145525-41-3
Formal Name:	(αS,3aR,7aS)-octahydro-γ-oxo-α-(phenylmethyl)-2H-isoindole-2-butanoic acid, hemicalcium salt
Synonyms:	KAD-1229, S21403
MF:	$C_{19}H_{24}NO_3$ • 1/2Ca
FW:	334.4
Purity:	≥98% (mixture of isomers)
UV/Vis.:	λ_{max}: 239 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

Mitiglinide (calcium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the mitiglinide (calcium salt) in the solvent of choice, which should be purged with an inert gas. Mitiglinide (calcium salt) is slightly soluble in DMSO, dimethyl formamide, methanol, and chloroform.

Description

Mitiglinide is an inhibitor of sulfonylurea receptor 1 (SUR1) linked to ATP-sensitive potassium channel $K_{ir}6.2$ (IC_{50} = 4 nM).[1] It is selective for SUR1/$K_{ir}6.2$ over SUR2A/$K_{ir}6.2$ and SUR2B/$K_{ir}6.2$ channels (IC_{50}s = 3 and 5 µM, respectively). Mitiglinide induces insulin release in HIT-T15 insulinoma cells and isolated mouse pancreatic islets when used at a concentration of 100 µM.[2] Oral administration of mitiglinide (1, 3, and 10 mg/kg) increases postprandial plasma insulin levels and inhibits postprandial increases in plasma glucose levels in a rat model of diabetes induced by streptozotocin (STZ; Item No. 13104).[3]

References

1. Reimann, F., Proks, P., and Ashcroft, F.M. Effects of mitiglinide (S 21403) on Kir6.2/SUR1, Kir6.2/SUR2A and Kir6.2/SUR2B types of ATP-sensitive potassium channel. *Br. J. Pharmacol.* **132(7)**, 1542-1548 (2001).
2. Ohnota, H., Koizumi, T., Tsutsumi, N., *et al.* Novel rapid- and short-acting hypoglycemic agent, a calcium(2s)-2-benzyl-3-(cis-hexahydro-2-isoindolinylcarbonyl) propionate (KAD-1229) that acts on the sulfonylurea receptor: Comparison of effects between KAD-1229 and gliclazide. *J. Pharmacol. Exp. Ther.* **269(2)**, 489-495 (1994).
3. Ohnota, H., Kitamura, T., Kinukawa, M., *et al.* A rapid- and short-acting hypoglycemic agent KAD-1229 improves post-prandial hyperglycemia and diabetic complications in streptozotocin-induced non-insulin-dependent diabetes mellitus rats. *Jpn. J. Pharmacol.* **71(4)**, 315-323 (1996).

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