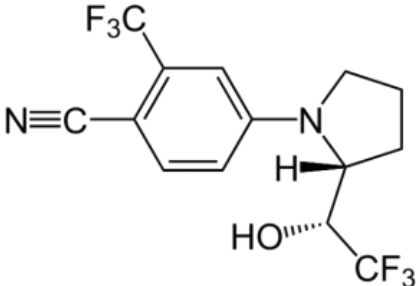


# Certificate of Analysis

<b>GCM Cat#:</b>	<b>Product Name:</b>	<b>Lot#:</b>
522377	LGD-4033 (Ligandrol)	021

<b>Chemical name</b>	
4-((R)-2-((R)-2,2,2-trifluoro-1-hydroxyethyl)pyrrolidin-1-yl)-2-(trifluoromethyl)benzonitrile	
<b>Synonyms</b>	
LGD-4033; LGD 4033; LGD4033; VK5211; VK-5211; VK 5211; Ligandrol.	
<b>Chemical structure</b>	<b>CAS# and Theoretical analysis</b>
	GCM Cat#: 522377 Name: LGD-4033 (Ligandrol) CAS#: 1165910-22-4 Lot#: 021 Chemical Formula: C <sub>14</sub> H <sub>12</sub> F <sub>6</sub> N <sub>2</sub> O Exact Mass: 338.08538 Molecular Weight: 338.25

Analysis item	Specifications / Results
<b>Appearance</b>	White to off-white solid powder
<b>Structure</b>	<sup>1</sup> H-NMR analysis matches the structure. MS analysis gives the correct molecule weight. Both NMR and MS data are consistent with those reported in the literature.
<b>Purity (HPLC)</b>	>99.0%
<b>Solubility</b>	Soluble in DMSO, not soluble in water.
<b>Conclusion</b>	This product conforms with GCM's quality standards
<b>Shipping condition</b>	Shipped under ambient temperature as non-hazardous chemical. This product is stable for a few weeks during ordinary shipping and time spent in customs.
<b>Storage condition</b>	Short term storage (weeks): 0 – 4 °C under dry condition Long term storage (months): -20 °C under dry condition
<b>Self life</b>	At least 5 years if properly stored.

**CAUTION: NOT FULLY TESTED. FOR RESEARCH ONLY, NOT FOR HUMAN USE**

