

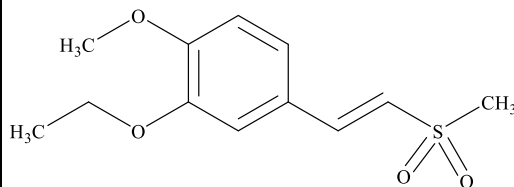
Certificate of Analysis

Certificate No.: 20200807009

Date: August 7, 2020

Retest date: August 5, 2023

Compound Name: Apremilast Impurity 12	
Synonyms:	(<i>E</i>)-2-ethoxy-1-methoxy-4-(2-(methylsulfonyl)vinyl)benzene
TLC Catalogue Number:	A-182022
CAS Number:	1831833-38-5
Molecular Weight:	256.32
Molecular Formula:	C ₁₂ H ₁₆ O ₄ S
Source:	TLC Pharmaceutical Standards
Source Lot No.:	4011-037A3
Storage Conditions:	Store at 2-8 °C
Solubility:	DMSO, THF, Acetonitrile



Test Description	Specifications	Results
Visual Description	White to off-white solid	Conforms
Identification		
IR	Conforms to structure	Conforms
MS	Conforms to structure	Conforms
¹H NMR	Conforms to structure	Conforms
Purity (HPLC)	Not less than 95.0%	100.0%
Impurity (HPLC)	N/A	
Water Content (KF)	N/A	0.2%
Residual Solvents (NMR)	0.2% acetonitrile	
Assay (%)	Not less than 90.0%	99.6%
Recommendation:	Released.	

Name	Department	Signature	Date
Reviewed and approved by:	Analytical Services		
Approved by:	Quality Assurance		

Attachments: HPLC, IR, MS and NMR spectra.