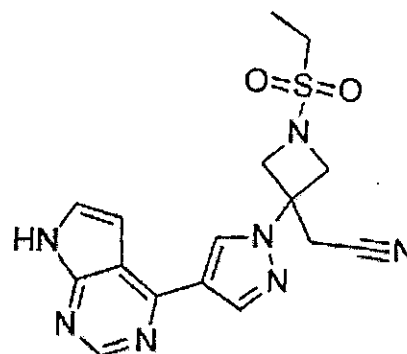


# LC Laboratories<sup>®</sup>

## CERTIFICATE OF ANALYSIS

### Baricitinib, Free Base, >99%

LC LABS CAT. NO.    **B-1600**  
FORMULA     $C_{16}H_{17}N_7O_2S$   
M.W.    371.42  
CAS NO.    [1187594-09-7]  
STORAGE    Store at or below -20 °C\*\*\*  
SOLUBILITY    Soluble in DMSO.



## ANALYTICAL DATA

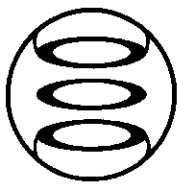
LOT NUMBER    **BRC-101**  
FORM    Crystalline solid; granular or powder  
COLOR    White to off-white  
HPLC PURITY    >99% (see attached chromatogram)  
TLC PURITY    >99% (see attached chromatogram)  
PROTON NMR    (see attached spectrum)  
ELEMENTAL ANALYSIS    For  $C_{16}H_{17}N_7O_2S$ :

	<u>Calculated</u>	<u>Found</u>
C	51.74%	51.71%
H	4.61%	4.53%
N	26.40%	26.31%
S	8.63%	8.61%

\*\*\*This product is stable at ambient temperature for several weeks during ordinary shipping and time spent in Customs or other delay. We recommend storage at -20 °C for long-term storage.

October 30, 2019

D:\COFA-BIZ\B-COFA\BRC101FL.WPD



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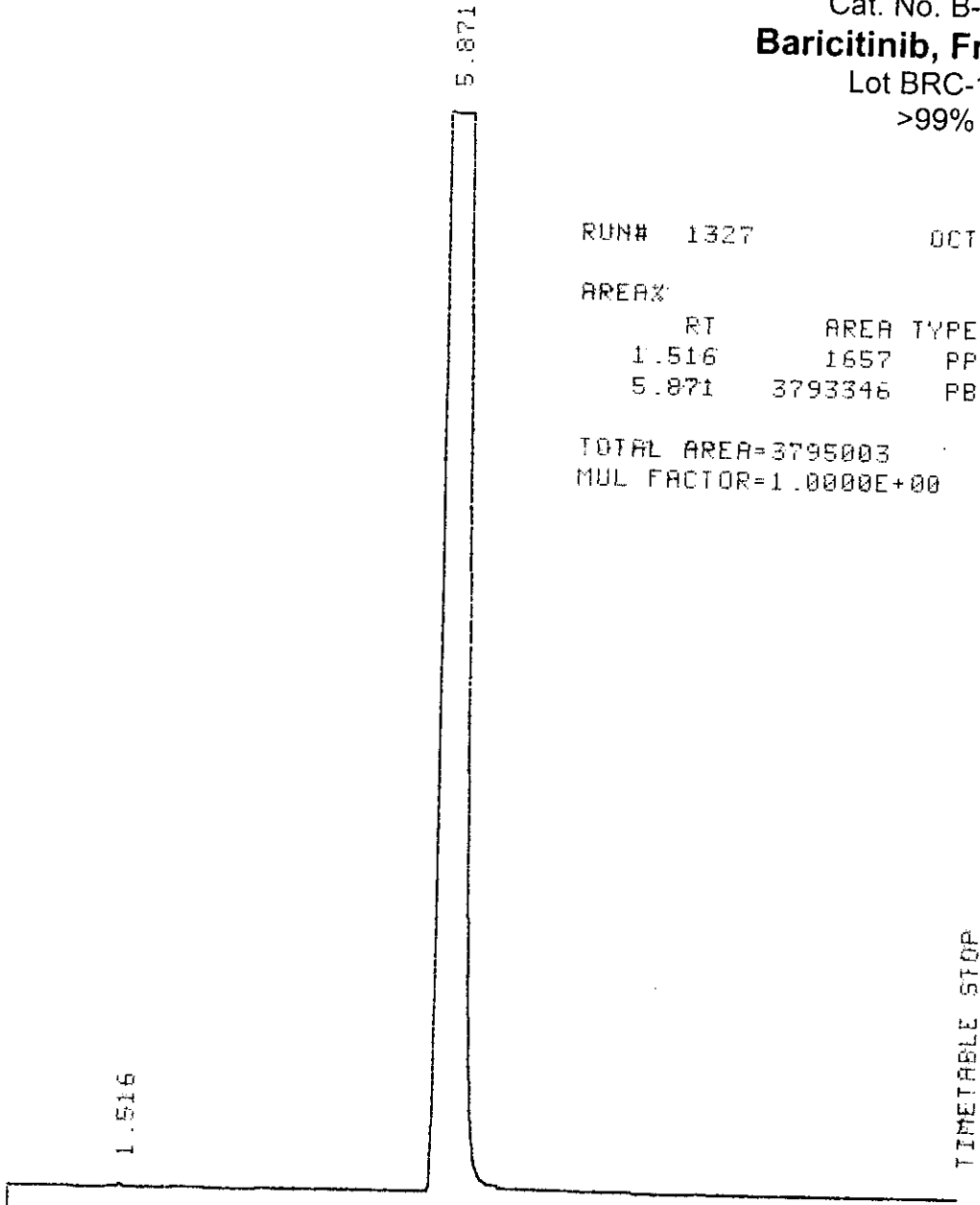
Cat. No. B-1600  
**Baricitinib, Free Base**  
 Lot BRC-101  
 >99%

RUN# 1327                      OCT 30, 2019    02:20:02

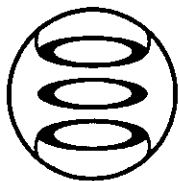
RT	AREA	TYPE	WIDTH	AREA%
1.516	1657	PP	.105	.04366
5.871	3793346	PB	.230	99.95632

TOTAL AREA=3795003  
 MUL FACTOR=1.0000E+00

\*CAT. No. B-1600 BARICITINIB, FREE BASE LOT No BRC-101  
 \* RUN # 1327    OCT 30, 2019    02:20:02  
 START

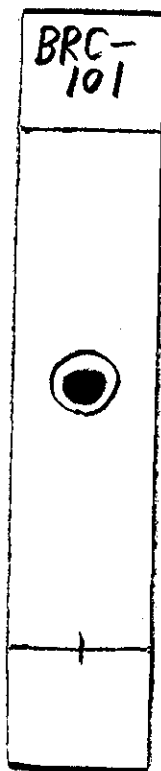


HPLC: C<sub>18</sub> Column, 4.6 mm x 30 cm  
 Acetonitrile/Methanol/Water/Trifluoroacetic acid 12/12/76/0.1  
 2 mL/min  
 UV<sub>254</sub> Detection

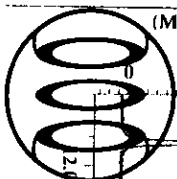


# LC Laboratories<sup>®</sup>

Cat. No. B-1600  
**Baricitinib, Free Base**  
Lot BRC-101  
>99%



- TLC: 60 Å silica gel plates with fluorescent indicator
- Develop with Chloroform/Methanol/conc. NH<sub>4</sub>OH 86/14/1
- Visualize via UV fluorescence quenching
- Also visualize by exposure to iodine vapor



(Millions)

# LC Laboratories®

9.0 10.0 11.0 12.0

BRC-101-300MHz\_PROTON-5.fid  
Acquisition Date: December 20, 2019  
Spectrometer Freq.: 300 MHz  
Solvent: DMSO-d<sub>6</sub>

X : parts per Million : 1H

12.1636

0.71

8.9346  
8.7102  
8.7066  
8.4795

1.02

0.96

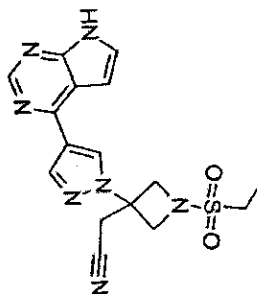
0.98

7.6362  
7.6279  
7.6169

1.0

7.0941  
7.0822

0.99



Cat. No. B-1600  
**Baricitinib, Free Base**  
Lot BRC-101  
>99%

4.6173  
4.5870  
4.2510  
4.2208

1.95

1.95

3.6970  
3.3482  
3.2758  
3.2511  
3.2273  
3.2026

1.91

2.02

2.4994  
2.4948  
2.4884

1.2623  
1.2412  
1.2376