



Certificate of Analysis

Product Name: Orexin A, Human, Bovine, Rat, Mouse
 Product #: 46-2-70 Lot #: 1302018T
 Sequence: Glp - Pro - Leu - Pro - Asp - Cys - Cys - Arg - Gln - Lys - Thr - Cys - Ser - Cys - Arg - Leu - Tyr - Glu - Leu - Leu - His - Gly - Ala - Gly - Asn - His - Ala - Ala - Gly - Ile - Leu - Thr - Leu - NH₂
 Molecular Weight: 3561.2 amu
 Mass Spectral Analysis: Electrospray "Exhibits correct MW" (see attached MS spectrum)
 HPLC Analysis: Peptide Purity: 97.3 % (see attached RP-HPLC chromatogram)
 Solubility: 1 mg/mL in water
 Appearance: White lyophilized powder
 Peptide Content: 86.7 %
 Counter Ion: Trifluoroacetate
 Date of Mfg: 02/01/13

Cert. of Analysis Remarks: There are disulfide bridges between Cys6-Cys12 and Cys7-Cys14.

Amino Acid Analysis:

	<u>Calc.</u>	<u>Found</u>	<u>Remarks</u>		<u>Calc.</u>	<u>Found</u>	<u>Remarks</u>		<u>Calc.</u>	<u>Found</u>	<u>Remarks</u>
Ala	3.00	3.15		Gly	3.00	2.98		Pro	2.00	1.96	
Arg	2.00	1.96		His	2.00	2.04		Ser	1.00	0.94	
Asx	2.00	2.00		Ile	1.00	1.04		Thr	2.00	1.88	
Cys	4.00	3.52		Leu	6.00	6.18		Tyr	1.00	1.06	
Glx	2.00	2.12		Lys	1.00	1.02		Other1	1.00	1.06	*1

Remarks: *1 Glp

Not for human use, research purposes only.

IMPORTANT: Store in Freezer (-15°C or colder) Immediately Upon Arrival. Please follow recommended solubility information provided above; no guarantee per other methods.

Quality Assurance By: _____

Shruti Patel

Quality Control Department

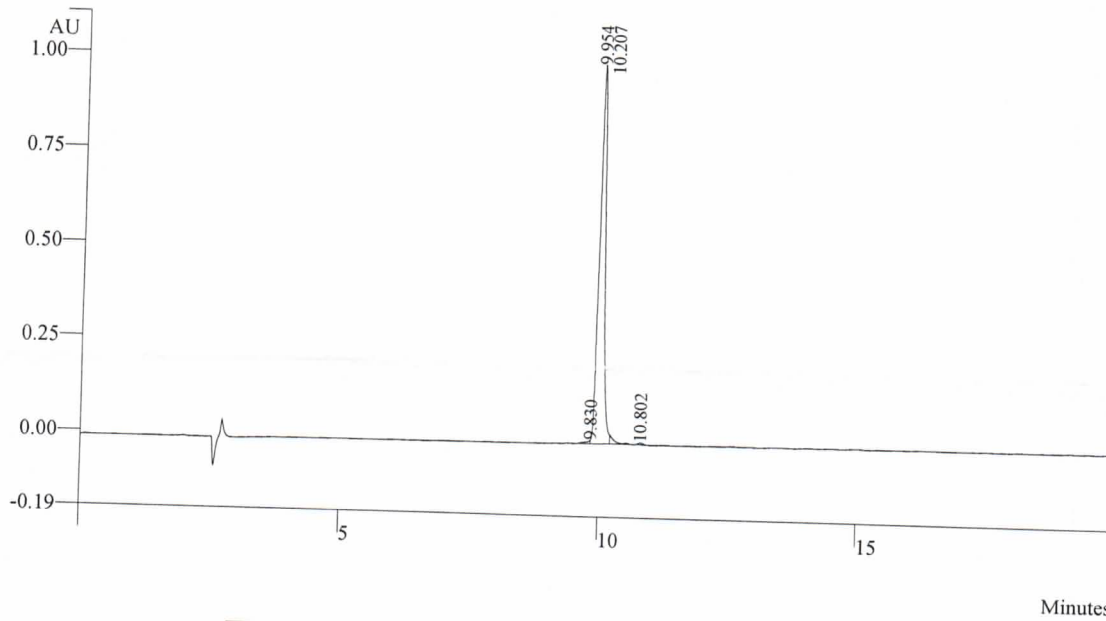
Date: 02/06/13

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Product Number/Lot Number: 46-2-70 / 1302018T

Data File:	c:\star\data\46-2-70\1302008t001.run	Calc Date:	02/04/2013 10:13:11
Channel:	2 = UV RESULTS	Times Calculated:	6
Sample ID:	1302018T	Calculation Method:	1302008t001-2.mth
Instrument (Inj):	Right Side System	Run Mode:	Analysis
Injection Date:	02/04/2013 09:50:42	Peak Measurement:	Peak Area
Injection Method:	c:\star\methods\right side method.mth	Calculation Type:	Percent
Run Time (min):	20.000		

Wavelength: 215 nm; Flow rate: 1.2 mL/min; Buffer A: 0.1% TFA in Water; Buffer B: 0.1%TFA IN 80% Acetonitrile; Temp.: RT
 Column: Discovery C18, 4.6mm x 250 mm, 5 micron; Gradient (linear): 25% - 45% buffer B in 20mins.; Inj. Vol.: 20 uL
 Analyst: Shilpa



Peak No	Result (%)	Ret Time (min)	Peak Area (counts)	Peak Height (counts)
1	0.6	9.830	49525	8984
2	97.3	9.954	7797304	1000877
3	1.7	10.207	138134	23326
4	0.4	10.802	32566	5520
	100.0		8017529	1038707

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MS Analysis Report

Sample ID: 46-2-70 **Lot:** 1302018T **Chemist:** Shilpa Patel

Acquisition Date: 02/04/13 13:08:11
Expected MS: MW:3561.2
Inst Method: C:\Xcalibur\data\SHILPA\SHILPA\INSTRUMENT METHOD\80%-B-Isocratic Positive 1Min.meth
Proc Method: C:\Xcalibur\data\SHILPA\SHILPA\PROCESSING METHOD\EXAMPLE 1
Data Path: 1302018T.RAW
Run Time: 0.95
Flow rate: 1.0 ml/min
Buffers: A: 0.1% TFA in Water; B: 0.1% TFA in Acetonitrile
Instruments: HPLC: Agilent 1100 Series; MS: Thermo Finnigan LCQ Advantage

1302018T #14-24 RT: 0.31-0.54 AV: 11 NL: 5.41E7
T: + c ESI Full ms [150.00-2000.00]

