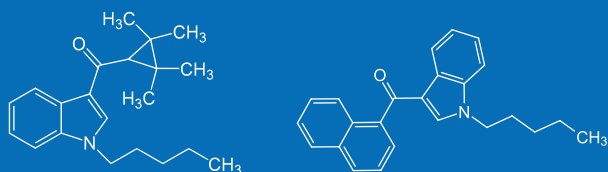


ARK™ UR-144/JWH-018 Assay



The ARK UR-144/JWH-018 Assay is an immunoassay intended for the qualitative determination of UR-144, JWH-018, and their metabolites in human urine at a cutoff concentration of 10 ng/mL. The assay is intended for use in laboratories with automated clinical chemistry analyzers.



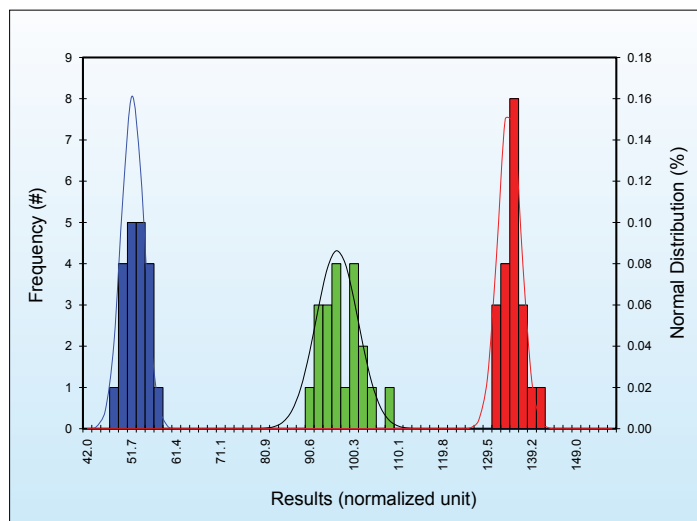
The ARK UR-144/JWH-018 Assay provides only a preliminary analytical test result. A more specific alternative chemical method must be used in order to obtain a confirmed positive analytical result. Gas Chromatography/Mass Spectrometry (GC/MS) or Liquid Chromatography/tandem Mass Spectrometry (LC-MS/MS) is the preferred confirmatory method. Clinical consideration and professional judgment should be exercised with any drug test result, particularly when the preliminary test result is positive.

KEY POINTS

- Convenient, liquid-stable, ready-to-use homogeneous enzyme immunoassay
- 10 ng/mL cutoff
- Excellent sensitivity and specificity for detection of UR-144, JWH-018 and their metabolites in human urine
- Nonhazardous preservatives

Next Generation Assays

QUALITATIVE PRECISION



Control Precision vs 10 ng/mL Cutoff Calibrator

QUALITATIVE 20 DAY PRECISION

Human Urine (ng/mL)	Relative % Cutoff	# of Results	Results
0.0	-100	160	160 Negative
2.5	-75	160	160 Negative
5.0	-50	160	160 Negative
7.5	-25	160	160 Negative
10.0	Cutoff	160	88 Negative / 72 Positive
12.5	+25	160	160 Positive
15.0	+50	160	160 Positive
17.5	+75	160	160 Positive
20.0	+100	160	160 Positive

Pooled Human Urine Samples containing UR-144 pentanoic acid were assayed in quadruplicate twice a day for 20 days. CLSI Guideline EP5-A3.

METHOD COMPARISON

ARK UR-144/JWH-018 Assay (10 ng/mL Cutoff)	LC-MS/MS		
		(+)	(-)
	(+)	23	3*
(-)	0	25	

*Three (3) samples had LC-MS/MS values between the low control (5 ng/mL) and the assay cutoff (10 ng/mL).

Sample ID #	ARK UR-144/JWH-018 Assay (10 ng/mL Cutoff)	Comparative Screening Method
1	Negative	Negative
2	Negative	Negative
3	Positive†	Positive
4	Positive†	Negative
5	Negative	Negative
6	Positive†	Negative
7	Negative	Negative

†These three (3) samples were confirmed to be positive by LC-MS/MS.

CROSS-REACTIVITY AND INTERFERENCE

Compound	Concentration (ng/mL)	Percent Cross-reactivity (%)
UR-144 pentanoic acid	10.0	100.00
JWH-018 pentanoic acid	8.3	120.48
AM-2201 6-hydroxyindole	8.0	125.00
JWH-073 N-butanoic acid	8.5	117.65
JWH-018 N-(5-hydroxypentyl)-B-D-Glucuronide	10.0	100.00
A-834735	13.2	75.76
JWH-073 N-(4-hydroxybutyl)	13.8	72.46
AM-2201 N-(4-hydroxypentyl)	14.6	68.49
JWH-200	15.2	65.79
JWH-073	15.3	65.36
UR-144 N-(5-hydroxypentyl) metabolite	15.4	64.94
JWH-073 N-(3-hydroxybutyl)	15.6	64.10
UR-144 N-(5-hydroxypentyl)-β-D-glucuronide	15.9	62.89
XLR-11 N-(4-hydroxypentyl) metabolite	15.9	62.89
A-796260	17.2	58.14
UR-144 N-(5-chloropentyl)	17.5	57.14
UR-144 N-heptyl	18.4	54.35
UR-144 4-Hydroxypentyl metabolite	18.9	52.91
UR-144	19.0	52.63
JWH-018 N-(5-hydroxypentyl)	19.5	51.28
XLR-11	20.0	50.00
JWH-018	20.6	48.54
AB-005	25.0	40.00
JWH-073 6-hydroxyindole	27.1	36.90
XLR-11 N-(4-pentenyl)	29.0	34.48
UR-144 N-(5-bromopentyl)	31.0	32.26
JWH-022	32.0	31.25
JWH-019	37.0	27.03
AM-2201	39.0	25.64
AM 2232	45.0	22.22
JWH-122 N-(4-hydroxypentyl)	50.0	20.00
JWH-122 pentanoic acid	50.0	20.00
UR-144 N-(4-chloropentyl) metabolite	70.0	14.29
JWH-122 N-(5-hydroxypentyl)	75.0	13.33
MAM2201 N-4-hydroxypentyl	92.0	10.87
JWH-018 5-hydroxyindole	95.0	10.53
3-(1-naphthoyl)-1H-indole	150	6.67
JWH-018 4-hydroxyindole	187	5.35
JWH-015	494	2.02
AM-694	500	2.00
JWH-398	500	2.00
JWH-007	510	1.96
JWH-122	528	1.89
AM-2233	950	1.05
RCS-4 2-methoxy isomer	1,750	0.57
JWH-250 N-pentanoic acid	3,000	0.33
JWH-210 5-hydroxypentyl	3,400	0.29
PB-22 N-pentanoic acid	4,000	0.25
PB-22 N-(5-hydroxypentyl)	4,500	0.22
JWH-203	5,000	0.20
JWH-210	6,500	0.15
JWH-081	16,000	0.06
JWH-250	20,000	0.05
5F-PB-22	30,000	0.03
BB-22	50,000	<0.02
BB-22 3-carboxyindole	50,000	<0.02
CP47497	50,000	<0.02

Compound	Concentration (ng/mL)	Percent Cross-reactivity (%)
Delta-9-THC	50,000	<0.02
JWH-250 5-hydroxyindole	50,000	<0.02
RCS-8	65,000	0.02
CP47497-C8	100,000	<0.01
JWH-201	100,000	<0.01
PB-22	100,000	<0.01
RCS-4	100,000	<0.01

- Tested endogenous substances do not interfere.

SAFETY AND STABILITY

Reagent on-board stability

Up to at least 60 days

Shelf Life of Reagents, Calibrators, and Controls

18 months from date of manufacturing

Safety

Nonhazardous preservatives

Contains sodium azide $\leq 0.09\%$

Results shown are typical and may vary among laboratory analyzers.

ORDERING INFORMATION

For Export Only – Not for Sale in USA

ARK™ AUR-144/JWH-018 Assay 5054-0001-00 R1 28mL, R2 14mL
5054-0001-01 R1 115mL, R2 58mL

ARK™ UR-144/JWH-018 Calibrator 5054-0002-01 2 x 10mL; Negative
5054-0002-02 2 x 10mL;
10 ng/mL Cutoff

ARK™ UR-144/JWH-018 Control 5054-0003-00 2 x 10mL;
LOW 5 ng/mL
2 x 10mL;
HIGH 15 ng/mL

For Criminal Justice and Forensic Use Only

ARK™ UR-144/JWH-018 Assay 5054-0004-00 R1 28mL, R2 14mL
5054-0004-01 R1 115mL, R2 58mL

ARK™ UR-144/JWH-018 Calibrator 5054-0005-01 2 x 10mL; Negative
5054-0005-02 2 x 10mL;
10 ng/mL Cutoff

ARK™ UR-144/JWH-018 Control 5054-0006-00 2 x 10mL;
LOW 5 ng/mL
2 x 10mL;
HIGH 15 ng/mL

ARK Diagnostics, Inc.
48089 Fremont Boulevard
Fremont, CA 94538
Tel: 510-270-6270 Fax: 510-270-6298

For Customer Support:
Call toll free: 877-869-2320
customersupport@ark-tdm.com
www.ark-tdm.com