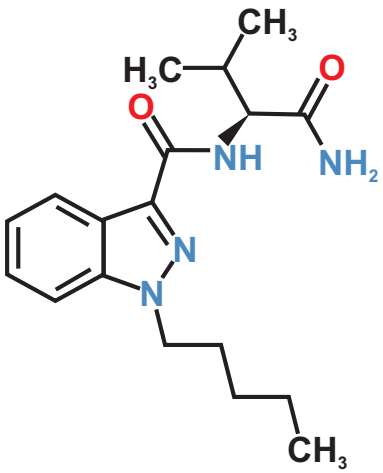
Synthetic Cannabinoids-3 Assay

Immunalysis and Specialty Diagnostix now offer a third homogeneous enzyme immunoassay for the detection of synthetic cannabinoids in urine. While the previous Synthetic Cannabinoid Assays target the first and second generation compounds and their respective metabolites, the new Synthetic Cannabinoid-3 Assay is intended for the analysis of AB-PINACA, AB-FUBINACA and their derivatives.



Assay Characteristics

- **Qualitative detection of AB-PINACA, AB-FUBINACA, and other currently relevant synthetic cannabinoid compounds**
- **Excellent specificity and sensitivity**
- **Liquid, stable, ready-to-use reagents, calibrators and controls – no reconstitution required**
- **Application protocols available for all major clinical chemistry analyzers**
- **Packaging tailored to your laboratory's specific needs**

Background

AB-PINACA was first identified as a component of synthetic cannabinoid products in 2012. It is based on an indazole backbone, whereas most of the JWH compounds have an indolyl base. The biochemical, physiological, and toxicological properties of AB-PINACA and its derivatives have yet to be determined.

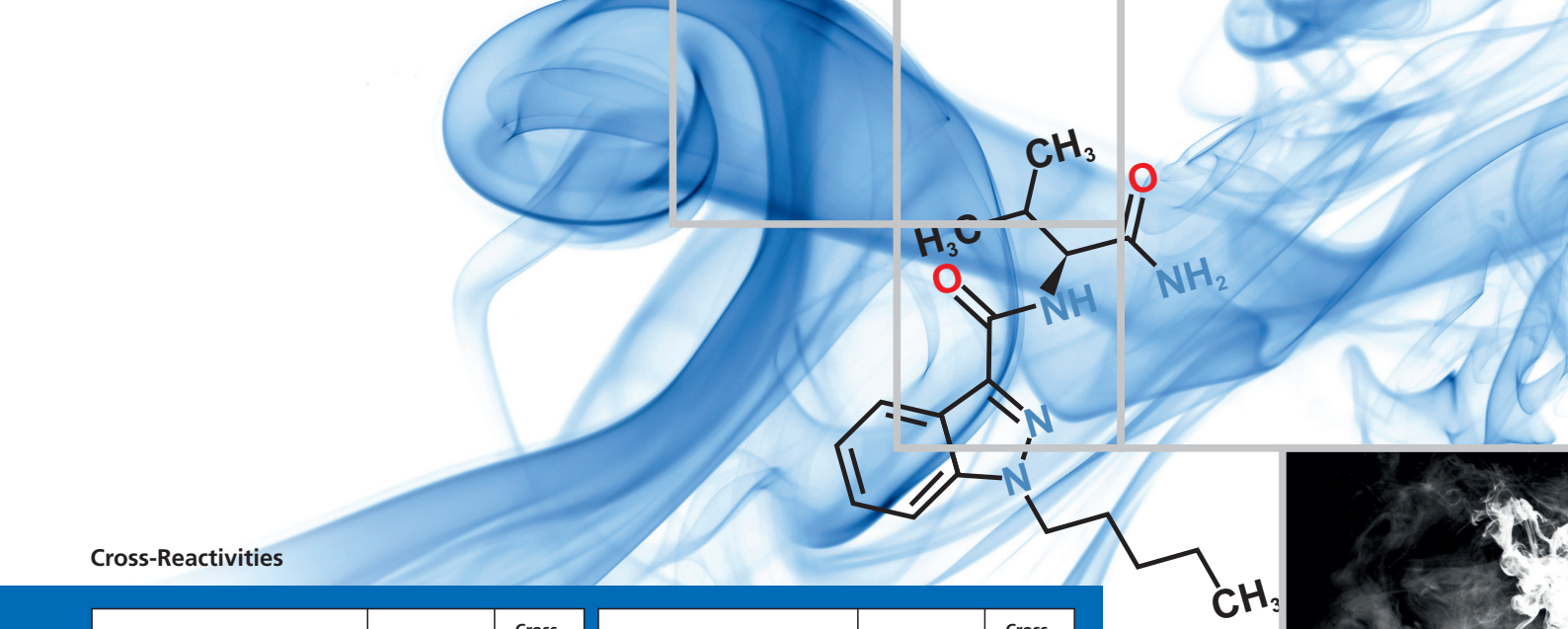
Originally, AB-PINACA was developed as an analgesic medication by Pfizer in 2009. In rat discrimination studies, AB-PINACA was found to act as a potent agonist for the CB_1 and CB_2 receptors and as a full substitute for Δ^9-THC, while being 1.5 times more potent.

AB-PINACA is sold under various street names, the most common being Cloud 9, Crown, and Relax. Sprayed on herbal blends or as a liquid in eyedropper bottles, it is usually used with vaporizing devices, such as hookahs or e-cigarettes.

The most commonly reported adverse effects of herbal blends supposedly containing AB-PINACA include difficulty in breathing, loss of motor control, altered mental status, loss of consciousness, convulsions, coma and death. There have been a number of reported cases of deaths and hospitalizations connected to AB-PINACA.

According to a recent report of the Global Drug Survey, synthetic cannabinoids are now considered to be the most dangerous of all recreational drugs.

Specialty Diagnostix



Cross-Reactivities

Analyte	Concentration (ng/mL)	Cross-Reactivity (%)
AB-PINACA Pentanoic Acid	10	100
AB-PINACA	10	100
AB-PINACA N-(4-hydroxypentyl)	8	125
AB-PINACA N-(5-hydroxypentyl)	10	100
5-fluoro AB-PINACA	8	125
5-fluoro ABICA	20	50
5-fluoro ADBICA	12	83
5-fluoro AB-PINACA N-(4-hydroxypentyl)	15	67
5-fluoro ADB-PINACA	9	111
5-chloro AB-PINACA	15	67
ADB-PINACA	15	67
ADB-PINACA Pentanoic Acid	7	143
ADB-PINACA N-(4-hydroxypentyl)	8	125
ADB-PINACA N-(5-hydroxypentyl)	6	167
AB-FUBINACA	10	100
ADB-FUBINACA	10	100
ADBICA	20	50
ADBICA N-Pentanoic Acid	15	67
ADBICA N-(4-hydroxypentyl)	15	67
ADBICA N-(5-hydroxypentyl)	12	83
AD-CHMINACA	15	67

Analyte	Concentration (ng/mL)	Cross-Reactivity (%)
AM2201 N-(4-hydroxypentyl)	100 000	< 0.05
JWH-018	35 000	< 0.05
JWH-018 N-(5-hydroxypentyl	90 000	< 0.05
JWH-200	40 000	< 0.05
JWH-201	60 000	< 0.05
JWH-250	60 000	< 0.05
JWH-250 N-(5-hydroxypentyl)	25 000	< 0.05
JWH-250 N-(4-hydroxypentyl)	30 000	< 0.05
JWH-250 N-(5-carboxypentyl)	100 000	< 0.05
A-796260	3 000	0.33
A-834735	5 000	0.20
AB-005	50 000	0.20
AM-2232	100 000	< 0.05
UR-144	8 000	0.13
UR-144 N-(5-bromopentyl)	8 000	0.13
UR-144 N-(5-hydroxypentyl)-ß-d-glucuronide	3 000	0.33
UR-144 N-(5-chloropentyl	5 000	0.20
UR-144 N-(5-hydroxypentyl)	3 500	0.29
XLR-11	3 500	0.25
XLR-11 N-(4-hydroxypentyl)	3 000	0.33
XLR-11 N-(4-pentenyl)	8 000	0.13

Method Comparison

		LC-MS/MS	
		+	-
HEIA	+	40	0
	-	0	40

Sensitivity: 100%
Specificity: 100%
Accuracy: 100%

Ordering Information

Reagents	Size	Order No.
K2-III (Synthetic Cannabinoids-3) Assay	25 mL	350-0025EX
K2-III (Synthetic Cannabinoids-3) Assay	60 mL	350-0060WEX
K2-III (Synthetic Cannabinoids-3) Assay	100 mL	350-0100EX
Calibrators		
AB-PINACA Pentanoic Acid, 10 ng/mL	1 x 5 mL	10030
Controls		
AB-PINACA Pentanoic Acid Control Set, 5 ng/mL Low & 15 ng/mL High	2 x 5 mL	3012

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