

**Anti-K2/Spice, synthetic
cannabinoids, IgG****Rabbit Polyclonal Antibody
Cat. #1066 Lot P0709**

LIMITATIONS: THIS PRODUCT IS FOR RESEARCH USE ONLY AND IS NOT APPROVED FOR THERAPEUTIC OR DIAGNOSTIC USE.

Background:

The Tulip Biolabs, Inc. Anti-K2/Spice (synthetic cannabinoids), Cat. #1066, is a rabbit polyclonal IgG antibody. It has been used in a competitive ELISA format to test the presence of JWH-018, JWH-073, JWH-122, JWH-019, JWH-081, AM-2201 and related compounds and their metabolites in samples such as human urine (see Arntson *et al*, 2013). Cross-reactivity of various tested compounds are listed in Table 1.

Note: If this antibody is used in an immunoassay to detect synthetic cannabinoids, suspect test samples must be confirmed using an alternative analytical method, for example LC-MS-MS.

Immunogen:

JWH-018 conjugated to a carrier protein.

Supplied As:

2 mg/ml of protein A purified rabbit IgG in phosphate buffered saline with 0.05% sodium azide preservative.

Storage and Stability:

Stable for 1 year from date of shipment when stored at -20 or -70°C. Stable for at least 1 month at 4°C. Avoid freeze/thaw cycles.

Specificity and Comments:

Recognizes the synthetic cannabinoids JWH-018, JWH-073, JWH-122, JWH-019, JWH-081, AM-2201 and related compounds and several of their metabolites (see Table 1 and A. Arntson *et al*. (2013) *J. Analyt. Toxicol.* **37** 284).

Applications and Suggested Dilutions:

ELISA (for 96-well plate coating use 1-3µg/mL)
Note: This antibody is used in the Cat. #4300 K2/Spice ELISA kit.
Other methods not tested.

Please note: This information is intended as a guide. The optimal concentrations must be determined by the user.

Tulip BioLabs Other Related Products:

Cat. #4300

K2/Spice Synth Cannabinoids ELISA Kit

Cat. #8302

JWH-018 x HRP Conjugate

Cat. #1072

Anti-JWH-250 (Spice/K2), IgG

Cat. #1083

Anti-UR144/XLR11 (Spice/K2), IgG

Cat. #1086

Anti-PB-22, synthetic cannabinoid, IgG

Cat. #1087

Anti-AKB48, synthetic cannabinoid, IgG

Original Reference:

A. Arntson *et al*. (2013) *J. Analyt. Toxicol.* **37** 284

Note: This antibody was developed at Tulip Biolabs, Inc.

Useful References:

J.W. Huffman and D. Dai (1994) *Bioorg Med Chemistry* **4** 563

S. Dresen *et al*. (2010) *J Mass Spectrometry* **45** 760

M. Hutter *et al*. (2012) *J Mass Spectrometry* **47** 54

A. Wohlfarth *et al*. (2013) *Anal Chem* **85** 3730

Table 1. Drug and Metabolite Cross-Reactivity Relative to JWH-018-5-OH

COMPOUND	Cross-reactivity, %
JWH-122-4-OH-pentyl metab	200
JWH-019-6-OH-hexyl metab	125
JWH-073-N-4-OH-butyl metab	125
JWH-081-O-desmethyl-4-OH-pentyl metab	125
<i>JWH-018-5-OH (calibrator)</i>	<i>100</i>
AM-2201-N-4-OH-pentyl metab	50
JWH-022-4-keto	50
JWH-073-N-3-OH-butyl metab	50
JWH-081-O-desmethyl-5-OH-pentyl metab	50
JWH-398-5-OH-pentyl metab	50
JWH-018-N-4-OH-pentyl metab	25
JWH-018-N-pentanoic acid	25
JWH-019-5-OH-hexyl metab	25
JWH-200	25
JWH-122-5-OH-pentyl metab	17
JWH-022-3-OH	10
JWH-398	10
AM-2201	10
JWH-073 N-butanoic acid metab	8
JWH-210-4-OH-pentyl metab	7
JWH-210-5-OH-pentyl metab	7
AM-1220	6
JWH-018 5-OH glucuronide	6
JWH-018	5
JWH-019	5
JWH-073	5
WIN 55,212-2	5

Note: Cross-reactivity was determined using Cat. #4300 K2/Spice Synth Cannabinoids ELISA Kit. For additional cross-reactivity data see A. Arntson *et al.* (2013) *J. Analyt. Toxicol.* **37** 284.