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**Anti-JWH-250 (K2/Spice)  
synthetic cannabinoid, IgG****Rabbit Polyclonal Antibody  
Cat. #1072 Lot P0710**

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

**Background:**

The Tulip BioLabs, Inc. Anti-JWH-250 (K2/Spice) synthetic cannabinoid, Cat. #1072, is a rabbit polyclonal IgG antibody. It has been used in a competitive ELISA format to test the presence of JWH-250 and its 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-250 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 cannabinoid JWH-250, and several of its 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. #4400 JWH-250 (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. #4400

**JWH-250 (K2/Spice) Synth Cannabinoid  
ELISA Kit.**

Cat. #8402

**JWH-250 x HRP Conjugate**

Cat. #1066

**Anti-JWH-018 (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-250-4-OH

COMPOUND	Crossreactivity, %
JWH-250-4-OH (calibrator)	100
JWH-250-5-OH	50
JWH-250-N-pentanoic acid metab	50
JWH-250	12
AKB 48	<1
AM-1220	<1
JWH-018-N-5-OH-pentyl metab	<1
JWH-018-5-OH glucuronide	<1
JWH-018-6-OH-indole metab	<1
JWH-018-7-OH-indole metab	<1
JWH-022 C4 keto	<1
JWH-201	<1
JWH-203	<1
JWH-302	<1
RCS-8	<1
RCS-8 4-methoxy isomer	<1

Note: Cross-reactivity was determined using Cat. #4400 JWH-250 (K2/Spice) Synth Cannabinoid ELISA Kit. For additional cross-reactivity data see A. Arntson *et al.* (2013) *J. Analyt. Toxicol.* **37** 284.