

# Produktinformation



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Diagnostik & molekulare Diagnostik



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#### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic in





# Anti-Phencyclidine [6B5] Standard Size Ab03257-1.29

This is a Fab fragment with a his-tag.

This reformatted mouse antibody was made using the variable domain sequences of the original Mouse IgG1 format for improved compatibility with existing reagents assays and techniques.

**Isotype and Format:** Mouse Fab fragment, His-Tagged, Kappa

Clone Number: 6B5

**Alternative Name(s) of Target:** PCP; CI-395; Angel dust; PCE; TCP; phenyl cyclohexyl piperidine; aryl cyclohexylamine; tenocyclidine; 1-(1-phenylcyclohexyl)piperidine; CAS: 77-10-1; CHEBI:8058; mAb6B5;

ch6B5; ch-mAb6B5

**UniProt Accession Number of Target Protein:** 

Published Application(s): antagonist, immunotherapy, RIA, ELISA

Published Species Reactivity: Species independent

**Immunogen:** The original antibody was generated from a mouse immunized with a phencyclidine analogue hapten 5-[N-(1'phenylcyclohexyl)amino]pentanoic acid (PCHAP) conjugated to bovine serum albumin.

**Specificity:** This antibody binds phencyclidine (PCP/ angel dust) and also has binding affinity for other aryl cyclohexylamines like tenocyclidine (TCP) and PCE. PCP is a dissociative hallucinogenic drug used for its mind-altering effects. PCP may cause hallucinations, distorted perceptions of sounds, and violent behavior. PCP can produce a dose-dependent psychosis that resembles schizophrenia with behavior described as extremely agitated, bizarre, unpredictable and paranoid. It is a dopamine receptor agonist and an antagonist at the N-methyl-d-aspartate (NMDA) subtype of glutamate receptors. It has anticholinergic properties through blockade of ion channels in acetylcholine receptors. It has been used in some countries as an anti-parkinsonian agent.

**Application Notes:** The binding characterization of this antibody to 3[H]PCP was done using radioimmunoassay. The original IgG1 version of this antibody binds phencyclidine with an affinity of Kd= 1.3 nM. (PMID: 9618414). This antibody was useful in reversing PCP-induced central nervous system toxicity in laboratory animals. The Fab version of this antibody induced antagonism of behavioral effects of repeated intravenous PCP challenges. The Fab completely reversed all PCP-induced locomotor effects in a dose dependent manner. It also completely reversed the locomotor effects induced by two other structurally related potent analogs of PCP: 1-[1-(2-thienyl)cyclohexyl]piperidine and N-ethyl-1-phenylcyclohexylamine (PMID: 9618414). In a rat model for human acute PCP overdose, the antigen-

binding fragment (Fab) of mAb6B5 causes a rapid and effective redistribution of PCP out of the brain (PMID: 8768723). This redistribution also produces a rapid recovery from the behavioral toxicity produced by PCP, TCP and PCE in rats (PMID: 8768723; 9618414). Preclinical studies in rats show that mAb6B5 can reverse or reduce the in vivo pharmacological effects of PCP and other potent aryl cyclohexylamines such as TCP. When tested in a rat model based on human chronic PCP use, a single low dose of mAb6B5 provides long-term protection against the adverse effects of PCP and significantly improves the general health status of the animals. Single 1 gm dose of mAb6B5 IgG has the capability of reducing the toxic effects of 1.29gm/day of PCP for 6-8 weeks (PMID: 12829731). The binding characterization of chimeric version of this antibody was done using ELISA (PMID: 18068094). This antibody can be used as an immunotherapeutic agent for PCP and PCP-like drug abuse.

**Antibody First Published in:** Hardin et al. Pharmacodynamics of a monoclonal antiphencyclidine Fab with broad selectivity for phencyclidine-like drugs. J Pharmacol Exp Ther. 1998 Jun;285(3):1113-22. PMID:9618414

**Note on publication:** Describes the generation of the Fab fragment and tests its usefulness in the treatment of drug intoxication.

#### **Product Form**

Size: 100 µg Purified antibody.

**Purification:** Purified by Immobilized Metal Affinity Chromatography

**Supplied In:** PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -

20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.