ANTIBODYSHOP®

PRODUCT SPECIFICATION

26/05/2014

Anti-Butyrylcholinesterase (human, BChE)

Mouse monoclonal antibody, biotinylated

Subclass: IgG1/k

PRODUCT NO. **HAH 002-01 B**

Clone: 3E8

SPECIFICITY	HAH 002-01 is specific for butyrylcholinesterase from human serum or plasma.
IMMUNOGEN	Butyrylcholinesterase isolated from human plasma
TESTED APPLICATIONS	ELISA
SPECIES REACTIVITY (POSITIVE)	Human
SPECIES REACTIVITY (NEGATIVE)	Not determined
EPITOPE SPECIFICITY	Not determined

PRESENTATION

Content:	50 µL, 1 mg/mL +/- 15%. See Certificate of Analysis for details.
Preparation:	Biotinylated
Form:	Liquid
Solvent:	0.01 M phosphate buffer, pH 7.4, with 0.14 M NaCl and 15 mM sodium azide
Storage:	4-8ºC without exposure to light. No precautions necessary during handling.

APPLICATION

ELISA: HAH 002-01 reacts with BChE in normal human serum in sandwich ELISA, using HAH 002-01 as both capture and detection antibody (1). Serum cholinesterase activity can be measured by enzyme antigen immunoassay (EAIA) in combination with HAH 002-01 as capture antibody (2, 3). HAH 002-01 is also applicable in sophisticated immunomagnetic quantification assays for the detection of nerve agent adducts (4, 5).

TARGET

Butyrylcholinesterase (BChE, EC 3.1.1.8.) is synthetizised in the liver, and is predominantly found in serum, liver and pancreas. Butyrylcholinesterase is a tetrameric glycoprotein (molecular mass of 350 kDa), and consists of four subunits, each with molecular mass of 90 kDa.

REFERENCES

1. Aoki Y, Helzlsouer K, Strickland P (2014) Arylesterase Phenotype-Specific Positive Association Between Arylesterase Activity and Cholinesterase Specific Activity in Human Serum. Int. J. Environ. Res. Public Health 11:1422-1443.
2. Pan Y, Gao D, Yang W, Cho H, Yang G, Tai HH, Zhan CG (2005) Computational redesign of human butyrylcholinesterase for anticocaine medication. Proc Natl Acad Sci 102:16656-61.
3. Yang W, Pan Y, Zheng F, Cho H, Tai HH, Zhan CG (2009) Free-Energy Perturbation Simulation on Transition States and Redesign of Butyrylcholinesterase. Biophysical Journal 96:1931-1938.
4. Sporty J, Lemire S, Jakubowski E, Renner J, Evans R, Williams R, Schmidt J, van der Schans M, Noort D, Johnson R (2010) Immunomagnetic Separation and Quantification of Butyrylcholinesterase Nerve Agent Adducts in Human Serum. Anal Chem 82, 6593-6600.
5. Knaack J, Zhou Y, Abney C, Prezioso S, Magnuson M, Evans R, Jakubowski E, Hardy K, Johnson R (2012) High-Throughput Immunomagnetic Scavenging Technique for Quantitative Analysis of Live VX Nerve Agent in Water, Hamburger, and Soil Matrixes. Anal Chem 84:10052?10057.