

**Anti-Butyrylcholinesterase (human, BChE)****Mouse monoclonal antibody**

Subclass: IgG1/k

CAT. NO.

**HAH 002-01**

Clone:3E8

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

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**PRESENTATION****Content:** Available in 200 µL and 1 mL size. 1 mg/mL +/- 15%. See Certificate of Analysis for details.**Preparation:** Protein-A purified**Form:** Liquid**Solvent:** 0.01 M phosphate buffer, pH 7.4, containing 0.5 M NaCl and 15 mM sodium azide**Storage:** 4-8°C without exposure to light. No precautions necessary during handling.

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**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).**WB:** In Western blotting after SDS-PAGE no reaction is seen with either the reduced or unreduced form of BChE. No reaction is seen with acetylcholinesterase from human nervous tissue and erythrocytes.**TARGET** Butyrylcholinesterase (BChE, EC 3.1.1.8.) is synthesized 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**

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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.

**CONDITIONS**

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