

PRODUCT SPECIFICATION



HAH 002-01 Anti human Butyrylcholinesterase

mouse monoclonal antibody

| Article No. | 96970 (0.2 mL), 101075 (1.0 mL) | | | | | | | | |
|-----------------------------|---|--------|-----------|-------|-----|----------------|----|--------------------|-----|
| Product Name | HAH 002-01 Anti human Butyrylcholinesterase | | | | | | | | |
| Clone | 3E8 | | | | | | | | |
| Subclass | IgG1 / kappa | | | | | | | | |
| Description | <p>Preparation: Protein-A purified</p> <p>Concentration: 1 mg/mL \pm 10%, based on A_{280}. See Certificate of Analysis for details.</p> <p>Solvent: PBS, pH 7.2 – 7.4</p> <p>Storage: -18 °C or colder</p> | | | | | | | | |
| Antigen | Butyrylcholinesterase (BChE, EC 3.1.1.8.) is a tetrameric glycoprotein with a molecular mass of 350 kDa, which consists of four subunits, each with a molecular mass of app. 90 kDa. BChE is synthesized in the liver, and is predominantly found in serum, liver and pancreas. BChE is the principal cocaine-metabolizing enzyme in human serum and serves as scavenger for toxic organophosphorus pesticides and nerve agents (1, 2). | | | | | | | | |
| Immunogen | Butyrylcholinesterase purified from human plasma. | | | | | | | | |
| Specificity | HAH 002-01 reacts with BChE from human serum and plasma. | | | | | | | | |
| EPI TOPE SPECIFICITY | Not determined. | | | | | | | | |
| Reactivity | HAH 002-01 reacts with BChE from human serum in crossed immunoelectrophoresis and in sandwich ELISA using HAH 002-01 as capture antibody and biotinylated HAH 002-01 as detection antibody, respectively (3,4). Serum cholinesterase activity can be measured by enzyme antigen immunoassay (EAIA) using HAH 002-01 as catching antibody (5). HAH 002-01 can be used for purification of serum BChE by immunoprecipitation (6). | | | | | | | | |
| Culture Medium | Dulbecco's modified Eagle's medium with 10% fetal calf serum. | | | | | | | | |
| Fusion Partner | X63-Ag8.653. | | | | | | | | |
| Immunization | Female CF1xBalb/c F1 hybrid mice were immunized i.p. with immunogen adsorbed onto $Al(OH)_3$. | | | | | | | | |
| Application | <table border="1"><thead><tr><th>Method</th><th>Usability</th></tr></thead><tbody><tr><td>ELISA</td><td>yes</td></tr><tr><td>Immunoblotting</td><td>no</td></tr><tr><td>Immunofluorescence</td><td>nd.</td></tr></tbody></table> | Method | Usability | ELISA | yes | Immunoblotting | no | Immunofluorescence | nd. |
| Method | Usability | | | | | | | | |
| ELISA | yes | | | | | | | | |
| Immunoblotting | no | | | | | | | | |
| Immunofluorescence | nd. | | | | | | | | |

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References

- 1) **Yang W, Pan Y, Zheng F, Cho H, Tai HH, Zhan CG.** Free-Energy Perturbation Simulation on Transition States and Redesign of Butyrylcholinesterase
Biophys J. 2009 Mar 4; 96(5): 1931-1938.
- 2) **Masson P, Lockridge O.** Butyrylcholinesterase for protection from organophosphorus poisons; catalytic complexities and hysteretic behavior. Arch Biochem Biophys. 2010;15:494(2): 107.
- 3) **Brock A, Mortensen V, Rasmussen Loft AG, Nørgaard-Pedersen B.** Enzyme Immunoassay of Human Cholinesterase (EC 3.1.1.8) Comparison of immunoreactive substance concentration with catalytic activity concentration in randomly selected serum samples from healthy individuals. J Clin Chem Biochem. 1990;28(4):221-4.
- 4) **Aoki Y, Helzlsouer KJ, Strickland PT.** Arylesterase phenotype-specific positive association between arylesterase activity and cholinesterase specific activity in human serum. Int J Environ Res Public Health. 2014;11(2):1422-43.
- 5) **Hangaard J1, Whittaker M, Loft AG, Nørgaard-Pedersen B.** Quantification and phenotyping of serum cholinesterase by enzyme antigen immunoassay: methodological aspects and clinical applicability. Scand J Clin Lab Invest. 1991;51(4):349-58.
- 6) **Sporty JL1, Lemire SW, Jakubowski EM, Renner JA, Evans RA, Williams RF, Schmidt JG, van der Schans MJ, Noort D, Johnson RC.** Immunomagnetic separation and quantification of butyrylcholinesterase nerve agent adducts in human serum. Anal Chem. 2010;82(15):6593-600.

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