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**Recombinant Mouse Acetylcholinesterase / ACHE Protein (His tag)****Cat.NO.: TP07466**

3th Edition

**Synonyms:**mE1a, mE1b, mE1c, mE1c-long, mE1d, mE1d', mE1e

**Description:**Acetylcholinesterase, also known as ACHE, is an enzyme that degrades (through its hydrolytic activity) the neurotransmitter acetylcholine, producing choline and an acetate group. Acetylcholinesterase plays a crucial role in nerve impulse transmission at cholinergic synapses by rapid hydrolysis of the neurotransmitter acetylcholine (ACh). ACHE appears to be a potential therapeutic target at muscle injuries including organophosphate myopathy. It is an externally oriented membrane-bound enzyme and its main physiological role is termination of chemical transmission at cholinergic synapses and secretory organs by rapid hydrolysis of the neurotransmitter acetylcholine (ACh). ACHE plays important roles in the cholinergic system, and its dysregulation is involved in a variety of human diseases. ACHE was significantly down-regulated in the cancerous tissues of 69.2% of hepatocellular carcinoma (HCC) patients, and the low ACHE expression in HCC was correlated with tumor aggressiveness, an elevated risk of postoperative recurrence, and a low survival rate. Both the recombinant ACHE protein and the enhanced expression of ACHE significantly inhibited HCC cell growth in vitro and tumorigenicity in vivo. ACHE as a tumor growth suppressor in regulating cell proliferation, the relevant signaling pathways, and the drug sensitivity of HCC cells. Thus, ACHE is a promising independent prognostic predictor for HCC recurrence and the survival of HCC patients. ACHE is responsible for the hydrolysis of acetylcholine in the nervous system. It is inhibited by organophosphate and carbamate pesticides. However, this enzyme is only slightly inhibited by organophosphorothionates.

**Form:**PBS**Molecular Weight:**66.2 kDa**Sequences:**Met 1-Leu 614**Purity:**> 95% by HPLC**Concentration:****Endotoxin Level:**<1.0 EU per 1 ug of protein (determined by LAL method)**Storage:**Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.