Recombinant Mouse Carbonic Anhydrase 4, His-tagged

Cat. No. Car4-263M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Carbonic anhydrases produced in*HEK293*encodes the extracellular domain of mouse CA14 (NP_035927.1) (Met 1-Met 290). It was expressed with a C-terminal his tag.
Species	Mouse
Source	HEK293
ProteinLength	1-290 a.a.
Description	Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide to form HCO3- and protons. Since discovered in 1933, fifteen CA isoforms have been reported sofar. CA I, CA II, CA III, CA VII, and CA XIII are cytosolic enzymes, whereas CA IV, CA IX, CA XII, CA XIV, and CA XV are membrane-associated isoforms. They have different patterns of tissue-specific expression and play different physiologic roles. CA XIV is a polypeptide consisting of an extracellular N-terminal catalytic domain, a membrane-spanning segment and a short intracellular C-terminal segment with several potential phosphorylation sites. CA14 is highly expressed in all parts of the central nervous system (CNS) with lower expression in adult liver, heart, small intestine, colon, kidney, urinary bladder, and skeletal muscle.
Molecular Mass	The recombinant mouse CA14 consists of 286 amino acids and has a calculated molecular mass of 32.2 kDa. As a result of glycosylation, the recombinant protein

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	migrates as an approximately 45-48 kDa protein in SDS-PAGE under reducing conditions.
Predicted N Terminal	Ala 16.
Purity	> 95%, as determined by SDS-PAGE.
Formulation	Supplied as a 0.2μm filtered solution of PBS, pH7.4.
Reconstitution	Follow the instructions on the vial. Centrifuge the vial at 4℃ before opening to recover the entire contents.
Endotoxin	< 1.0 EU per 1μg cytokine as determined by the LAL method.
Stability	Samples are stable for up to twelve months from date of receipt -70°C.
Storage	Store it under sterile conditions at -70°C. It is recommended that the protein be aliquoted for optimal storage and be used as soon as possible. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name	carbonic anhydrase 4 [Mus musculus]
Synonyms	carbonic anhydrase 4; AW456718; Car4; carbonic anhydrase IV; CA IV; OTTMUSP00000001000; carbonate dehydratase IV
Gene ID	12351
mRNA Refseq	NM_007607

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Protein Refseq	NP_031633
UniProt ID	Q64444
Chromosome Location	11 C
Pathway	Nitrogen metabolism
Function	carbonate dehydratase activity; lyase activity; metal ion binding; zinc ion binding
PDB rendering based on 1znc.	

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