

## ICA Protein, Mouse (HEK293, His)

<b>Cat. No.:</b>	HY-P73912
<b>Synonyms:</b>	Inhibitor of carbonic anhydrase; Ica
<b>Species:</b>	Mouse
<b>Source:</b>	HEK293
<b>Accession:</b>	Q9DBD0/NP_082194.1 (L20-Y700)
<b>Gene ID:</b>	71775
<b>Molecular Weight:</b>	Approximately 76.2-80 kDa

### PROPERTIES

#### AA Sequence

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L P E K T I R W C V   V S D H E A T K C S   S F R D N M K K V L   P A G G P A V T C V
R K M S H P E C I R   D I S A N K V D A V   T V D G A L V A E A   D L P H H S L K P I
M A E Y Y G S K D D   P K T H Y Y V V A M   A K K G T G F Q L N   Q L R G K K S C H T
G L G W S A G W Y V   P L S T L L P S G S   R E T A A A T F F S   S S C V P C A D G K
M F P S L C Q L C A   G K G T D K C A C S   S R E P Y F G S W G   A L K C L Q D G T A
D V S F V K H L T V   F E A M P T K A D R   D Q Y E L L C M D N   T R R P V E E Y E Q
C Y L A R V P S H V   V V A R S V D G K E   D S I Q E L L R V A   Q E H F G K D K S S
P F Q L F G S P H G   E D L L F T D A A H   G L L R V P R K I D   I S L Y L G Y E F L
S A F R N L K R G L   E D S Q R V K W C A   V G Q Q E R T K C D   Q W S A V S G G A L
A C A T E E T P E D   C I A A T M K G E A   D A M S L D G G F A   Y V A G H C G L V P
V L A E N Y L S T H   S S G R L G S K C V   N A P L E G Y Y V V   A V V K K S D V G I
T W K S L Q G K K S   C H T A V G T S E G   W N V P M G L I Y N   Q T G S C K F D A F
F S R S C A P G S D   P D S P L C A L C V   G G N N P A H M C A   A N N A E G Y H G S
S G A L R C L V E K   G D V A F M K H P T   V L Q N T D G K N P   E P W A K G L K H E
D F E L L C L D G T   R K P V T E A Q S C   H L A R V P N R A V   F S R K D K A D F V
R R I L F N Q Q E L   F G R N G F E Y M M   F Q M F E S S A K D   L L F S D D T E C L
S N L Q N K T T Y K   T Y L G P Q Y L T L   M D N F R Q C L S S   E L L D A C T F H K
Y

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#### Biological Activity

Data is not available.

#### Appearance

Lyophilized powder

#### Formulation

Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.

#### Endotoxin Level

<1 EU/µg, determined by LAL method.

#### Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH<sub>2</sub>O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

#### Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is

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recommended to freeze aliquots at -20°C or -80°C for extended storage.

**Shipping**

Room temperature in continental US; may vary elsewhere.

## DESCRIPTION

### Background

ICA protein emerges as a potent inhibitor for carbonic anhydrase 2 (CA2), contributing to the intricate regulatory network governing carbonic anhydrase activity. In its functional role, ICA does not bind iron ions, delineating its specificity in enzymatic inhibition. Structurally, ICA functions as a monomer, underscoring its individuality in executing its inhibitory function. Notably, ICA engages in molecular interactions, specifically with CA2, through its transferrin-like domain 2, further emphasizing its regulatory role within the context of carbonic anhydrase function. This interplay positions ICA as a key player in modulating carbonic anhydrase activity, adding nuance to the finely tuned mechanisms governing enzymatic processes.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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