

## AADAC Protein, Human (His-SUMO)

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| <b>Cat. No.:</b>         | HY-P72067   |
| <b>Synonyms:</b>         | AAAD_HUMAN; Aada; Aadac; Arylacetamide deacetylase esterase; ; Arylacetamide deacetylase; CES5A1; DAC |
| <b>Species:</b>          | Human   |
| <b>Source:</b>           | E. coli   |
| <b>Accession:</b>        | P22760 (P24-L399)   |
| <b>Gene ID:</b>          | 13  |
| <b>Molecular Weight:</b> | Approximately 63.1 kDa  |

### PROPERTIES

|                                |  |
|--------------------------------|--|
| <b>AA Sequence</b>             | <pre> P D N V E E P W R M      M W I N A H L K T I      Q N L A T F V E L L      G L H H F M D S F K V V G S F D E V P P      T S D E N V T V T E      T K F N N I L V R V      Y V P K R K S E A L R R G L F Y I H G G      G W C V G S A A L S      G Y D L L S R W T A      D R L D A V V V S T N Y R L A P K Y H F      P I Q F E D V Y N A      L R W F L R K K V L      A K Y G V N P E R I G I S G D S A G G N      L A A A V T Q Q L L      D D P D V K I K L K      I Q S L I Y P A L Q P L D V D L P S Y Q      E N S N F L F L S K      S L M V R F W S E Y      F T T D R S L E K A M L S R Q H V P V E      S S H L F K F V N W      S S L L P E R F I K      G H V Y N N P N Y G S S E L A K K Y P G      F L D V R A A P L L      A D D N K L R G L P      L T Y V I T C Q Y D L L R D D G L M Y V      T R L R N T G V Q V      T H N H V E D G F H      G A F S F L G L K I S H R L I N Q Y I E      W L K E N L </pre> |
| <b>Biological Activity</b>     | The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.   |
| <b>Appearance</b>              | Lyophilized powder.  |
| <b>Formulation</b>             | Lyophilized from a 0.2 µm solution of Tris-based buffer, 50% Glycerol.   |
| <b>Endotoxin Level</b>         | <1 EU/µg, determined by LAL method.  |
| <b>Reconstitution</b>          | It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.  |
| <b>Storage &amp; Stability</b> | 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 recommended to freeze aliquots at -20°C or -80°C for extended storage.   |
| <b>Shipping</b>                | Room temperature in continental US; may vary elsewhere.  |

### DESCRIPTION

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| <b>Background</b> | Arylacetamide deacetylase (AADAC) is the major enzyme responsible for the hydrolysis of various clinical drugs, such as |
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flutamide, phenacetin, rifamycins, indiplon, prasugrel, and ketoconazole. AADAC is expressed in the human liver and gastrointestinal tract. AADAC is conserved in animal species, including mice, rats, dogs, and monkeys, although mice and rats have multiple Ces1 and Ces2 isoforms. It has been reported that the expression level of dog CES1 and CES2 in the intestine is much lower than that in the liver. AADAC overexpression alters multiple vascular smooth muscle cells properties and decreases murine cardiovascular disease<sup>[1][2]</sup>.

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## REFERENCES

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[1]. Yoshida T, et, al. Difference in substrate specificity of carboxylesterase and arylacetamide deacetylase between dogs and humans. *Eur J Pharm Sci.* 2018 Jan 1;111:167-176.

[2]. Misra A, et, al. Translational Research in Culture: AADAC, Diabetes, and Cardiovascular Disease. *Cell Stem Cell.* 2020 Jul 2;27(1):6-7.

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

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