

CHST15 Protein, Human (HEK293, His)

Cat. No.:	HY-P76258
Synonyms:	Carbohydrate sulfotransferase 15; hBRAG; GalNAc4S-6ST; BRAG
Species:	Human
Source:	HEK293
Accession:	Q7LFX5 (S99-T561)
Gene ID:	51363
Molecular Weight:	Approximately 70-90 kDa due to the glycosylation.

PROPERTIES

AA Sequence	<p> S G A H Q E L L I S S P F H Y G G F P S N P S L M D S E N P S D T K E H H H Q S S V N N I S Y M K D Y P S I K L I I N S I T T R I E F T T R Q L P D L E D L K K Q E L H M F S V I P N K F L P N S K S P C W Y E E F S G Q N T T D P Y L T N S Y V L Y S K R F R S T F D A L R K A F W G H L A H A H G K H F R L R C L P H F Y I I G Q P K C G T T D L Y D R L R L H P E V K F S A I K E P H W W T R K R F G I V R L R D G L R D R Y P V E D Y L D L F D L A A H Q I H Q G L Q A S S A K E Q S K M N T I I I G E A S A S T M W D N N A W T F F Y D N S T D G E P P F L T Q D F I H A F Q P N A R L I V M L R D P V E R L Y S D Y L Y F A S S N K S A D D F H E K V T E A L Q L F E N C M L D Y S L R A C V Y N N T L N N A M P V R L Q V G L Y A V Y L L D W L S V F D K Q Q F L I L R L E D H A S N V K Y T M H K V F Q F L N L G P L S E K Q E A L M T K S P A S N A R R P E D R N L G P M W P I T Q K I L R D F Y R P F N A R L A Q V L A D E A F A W K T T </p>
Biological Activity	Measured by its ability to transfer sulfate from PAPS to chondroitin sulfate. The specific activity is 529.117 pmol/min/μg that incubate at 37 °C for 20 minutes.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 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 ₂ 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. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

CHST15 protein functions as a sulfotransferase with a distinctive role in transferring sulfate from 3'-phosphoadenosine 5'-phosphosulfate (PAPS) to the C-6 hydroxyl group of the GalNAc 4-sulfate residue in chondroitin sulfate A, leading to the formation of chondroitin sulfate E containing GlcA-GalNAc(4,6-SO₄) repeating units. Additionally, CHST15 transfers sulfate to a unique non-reducing terminal sequence, GalNAc(4SO₄)-GlcA(2SO₄)-GalNAc(6SO₄), resulting in a highly sulfated structure reminiscent of thrombomodulin chondroitin sulfate. Beyond its role in chondroitin sulfate biosynthesis, CHST15 may function as a B-cell receptor involved in BCR ligation-mediated early activation, mediating regulatory signals crucial to B-cell development and the potential regulation of B-cell-specific RAG expression. However, the precise implications of these results in vivo remain unclear. The multifaceted activities of CHST15 highlight its importance in the intricate molecular processes governing chondroitin sulfate modifications and B-cell regulatory pathways, though further research is needed to elucidate its in vivo functions comprehensively.

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

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