**Proteins** 

**Product** Data Sheet



## 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**

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 CW 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 WW 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   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, p H 7.4.  Endotoxin Level < 1 EU/µg, determined by L AL method.  Reconsititution It is not recommended to reconstitute to a concentration less than 100 µg/m L in dd H <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% H SA, 10% F BS or 5% T rehalose).  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.	AA Sequence				
QELHMFSVIP   NKFLPNSKSP   CWYEEFSGQN   TTDPYLTNSY   VLYSKRFRST   FDALRKAFWG   HLAHAHGKHF   RLRCLPHFYI   IGQPKCGTTD   LYDRLRLHPE   VKFSAIKEPH   WWTRKRFGIV   RLRDGLRDRY   PVEDYLDLFD   LAAHQIHQG   QASSAKEQSK   MNTIIIGEAS   ASTMWDNNAW   TFFYDNSTDG   EPPFLTQDFI   HAFQPNARLI   VMLRDPVERL   YSDYLYFASS   NKSADDFHEK   VTEALQLFEN   CMLDYSLRAC   VYNNTLNNAM   PVRLQVGLYA   VYLLDWLSVF   DKQQFLILRL   EDHASNVKYT   MHKVFQFLNL   GPLSEKQEAL   MTKSPASNAR   RPEDRNLGPM   WPITQKILRD   FYRPFNARLA   QVLADEAFAW   KTT      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 from a 0.22 μm filtered solution of PBS, pH7.4.     Endotoxin Level   <1 EU/µg, determined by LAL method.     Reconsititution   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. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.	AA Sequence	SGAHQELLIS	SPFHYGGFPS	NPSLMDSENP	SDTKEHHHQS
VLYSKRFRST FDALRKAFWG HLAHAHGKHF RLRCLPHFYI IGQPKCGTTD LYDRLRLHPE VKFSAIKEPH WWTRKRFGIV RLRDGLRDRY PVEDYLDLFD LAAHQIHQGL QASSAKEQSK MNTIIIGEAS ASTMWDNNAW TFFYDNSTDG EPPFLTQDFI HAFQPNARLI VMLRDPVERL YSDYLLYFASS NKSADDFHEK VTEALQLFEN CMLDYSLRAC VYNNTLNNAM PVRLQVGLYA VYLLDWLSVF DKQQFLILRL EDHASNVKYT MHKVFQFLNL GPLSEKQEAL MTKSPASNAR RPEDRNLGPM WPITQKILRD FYRPFNARLA QVLADEAFAW KTT   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 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. It is recommended to freeze aliquots at -20°C for extended storage.		SVNNISYMKD	YPSIKLIINS	ITTRIEFTTR	QLPDLEDLKK
I G Q P K C G T T D		QELHMFSVIP	NKFLPNSKSP	CWYEEFSGQN	TTDPYLTNSY
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 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   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  1t 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. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		VLYSKRFRST	FDALRKAFWG	HLAHAHGKHF	RLRCLPHFYI
MNTIIIGEAS ASTMWDNNAW TFFYDNSTDG EPPFLTQDFI HAFQPNARLI VMLRDPVERL YSDYLYFASS NKSADDFHEK VTEALQLFEN CMLDYSLRAC VYNNTLNNAM PVRLQVGLYA VYLLDWLSVF DKQQFLILRL EDHASNVKYT MHKVFQFLNL GPLSEKQEAL MTKSPASNAR RPEDRNLGPM WPITQKILRD FYRPFNARLA QVLADEAFAW KTT   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  Al EU/µg, determined by LAL method.  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. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		IGQPKCGTTD	LYDRLRLHPE	VKFSAIKEPH	WWTRKRFGIV
HAFQPNARLI VMLRDPVERL YSDYLYFASS NKSADDFHEK VTEALQLFEN CMLDYSLRAC VYNNTLNNAM PVRLQVGLYA VYLLDWLSVF DKQQFLILRL EDHASNVKYT MHKVFQFLNL GPLSEKQEAL MTKSPASNAR RPEDRNLGPM WPITQKILRD FYRPFNARLA QVLADEAFAW KTT  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  41 EU/µg, determined by LAL method.  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. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		RLRDGLRDRY	PVEDYLDLFD	LAAHQIHQGL	QASSAKEQSK
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  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.  Reconsititution 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. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		MNTIIIGEAS	ASTMWDNNAW	TFFYDNSTDG	EPPFLTQDFI
VYLLDWLSVF DKQQFLILRL EDHASNVKYT MHKVFQFLNL GPLSEKQEAL MTKSPASNAR RPEDRNLGPM WPITQKILRD FYRPFNARLA QVLADEAFAW KTT  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.  Reconsititution 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. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		HAFQPNARLI	VMLRDPVERL	YSDYLYFASS	NKSADDFHEK
GPLSEKQEAL MTKSPASNAR RPEDRNLGPM WPITQKILRD FYRPFNARLA QVLADEAFAW KTT  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.  Reconsititution 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. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		VTEALQLFEN	CMLDYSLRAC	VYNNTLNNAM	PVRLQVGLYA
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 <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. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		VYLLDWLSVF	DKQQFLILRL	EDHASNVKYT	MHKVFQFLNL
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.		GPLSEKQEAL	MTKSPASNAR	RPEDRNLGPM	WPITQKILRD
incubate at 37 °C for 20 minutes.  Appearance  Lyophilized powder.  Endotoxin Level  Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.  Endotoxin Level  *I EU/μg, determined by LAL method.  Reconsititution  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. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.		FYRPFNARLA	QVLADEAFAW	KTT	
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Formulation       Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.         Endotoxin Level       <1 EU/μg, determined by LAL method.	Biological Activity				
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aliquots at -20°C or -80°C for extended storage.	Reconsititution				
Shipping Room temperature in continental US; may vary elsewhere.	Storage & Stability				
	Shipping	Room temperature in con	tinental US; may vary elsew	here.	

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## **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-SO(4)) 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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