

## Siglec-7 Protein, Human (HEK293, His)

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| Cat. No.:         | HY-P71311   |
| Synonyms:         | Sialic acid-binding Ig-like lectin 7; AIRM-1; D-siglec; CD328; SIGLECT7 |
| Species:          | Human   |
| Source:           | HEK293  |
| Accession:        | Q9Y286 (Q19-L353)   |
| Gene ID:          | 27036   |
| Molecular Weight: | 50-70 kDa   |

### PROPERTIES

#### AA Sequence

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

#### Appearance

Lyophilized powder.

#### Formulation

Lyophilized from a 0.2  $\mu$ m filtered solution of PBS, pH 7.4.

#### Endotoxin Level

<1 EU/ $\mu$ g, determined by LAL method.

#### Reconstitution

It is not recommended to reconstitute to a concentration less than 100  $\mu$ g/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 recommended to freeze aliquots at -20°C or -80°C for extended storage.

#### Shipping

Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

#### Background

Siglec-7 protein, identified as a putative adhesion molecule, serves as a mediator of sialic-acid dependent cellular binding. It exhibits a preference for binding to alpha-2,3- and alpha-2,6-linked sialic acid, along with interactions with disialogangliosides such as disialogalactosyl globoside, disialyl lactotetraosylceramide, and disialyl GalNAc

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lactotetraosylceramide. Notably, the sialic acid recognition site of Siglec-7 may undergo masking due to cis interactions with sialic acids on the same cell surface. In immune responses, it functions as an inhibitory receptor, inducing tyrosine phosphorylation upon ligand binding and recruiting cytoplasmic phosphatases through their SH2 domains, thereby blocking signal transduction and inhibiting natural killer cell cytotoxicity. Siglec-7 may also play a role in hemopoiesis, inhibiting the differentiation of CD34+ cell precursors towards the myelomonocytic cell lineage and impeding the proliferation of leukemic myeloid cells in vitro. Additionally, it interacts with PTPN6/SHP-1 upon phosphorylation.

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

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