

CD164, Human, Recombinant, 0.05 mg

Catalog Number 5100

DESCRIPTION

CD164 (Sialomucins) belongs to a heterogeneous group of secreted or membrane-associated mucins that appear to play two key but opposing roles *in vivo*: 1) as cytoprotective or anti-adhesive agents and 2) as adhesion receptors. CD164 is a type I integral transmembrane sialomucin that functions as an adhesion receptor. Recombinant CD164 protein may serve as coating matrix protein for studying of hematopoietic stem cell (HSC) functions *in vitro*.

Full-length of human CD164 extracellular domain cDNA (24 - 162 aa) was constructed with 29 N-terminal T7/His tag and expressed in *E. coli* as inclusion bodies. The final product was refolded using a unique "temperature shift inclusion body refolding" technology and chromatographically purified as soluble protein.

Characteristics

Parameter, Testing, and Method	CD164, Human, Recombinant Catalog # 5100
Quantity	0.05 mg (50 µg/vial)
Volume	0.1 mL
Concentration	0.5 mg/mL
Purity	≥90% as measured by SDS PAGE
Formulation	Formulated in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, L-Arginine, DTT and Glycerol.
Form	Solution
Production Type	Recombinant – <i>E. coli</i>
Storage Temperature	-20 °C
Shelf Life	12 months after receipt
Sterilization Method	Filtration
Cell Attachment Activity	Passes
Sterility	No growth
Gene Symbols	CD164 (endolyn, MUC-24)
Accession Number	NP_006007

Recombinant Protein Sequence	MASMTGGQQMGRGHHHHHHGNLY FQGGEFDKNTTQHPNVTTLAPISNVT SAPVTSLSPLVTTTPAPETCEGRNSCV SCFNVSVVNTTCFWIECKDESYCSH NSTVSDCQVGNTTDFCSVSTATPVP TANSTAKPTVQSPSTTSKVTVTTSGT TNNTVTPTSQPVRKSTFD
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APPLICATIONS

This product is for R&D use only and is not intended for human or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

INSTRUCTIONS FOR USE

Use these recommendations as guidelines to determine the optimal coating conditions for your culture system.

1. Thaw CD164 and dilute to desired concentration using serum-free medium or PBS. The final solution should be sufficiently dilute so that the volume added covers the surface evenly.

Note: Use 1 ml PBS per well in a 6-well plate.

2. Add 1 – 10 µg protein to each well and incubate at 2 to 10°C overnight.

3. After incubation, aspirate remaining material.

4. Plates are ready for use. They may also be stored at 2-8°C damp or air dried if sterility is maintained.

Coating this recombinant matrix protein at 1-10 µg / well (6 well plate) in HSC cell specific medium can be used for human HSC / receptor interaction study *in vitro*.

REFERENCES:

(1) Masuzawa, Y., et al. A novel core protein as well as polymorphic epithelial mucin carry peanut agglutinin binding sites in human gastric carcinoma cells: sequence analysis and examination of gene expression. *J. Biochem.* 112 (5), 609-615. (1992)

(2) Zannettino, A.C., et al. The sialomucin CD164 (MGC-24v) is an adhesive glycoprotein expressed by human hematopoietic progenitors and bone marrow stromal cells that serves as a potent negative regulator of hematopoiesis. *Blood* 92 (8), 2613-2628. (1998).