

Synonym

CD161, C-type lectin domain family 5 member B, HNKR-P1a, NKR-P1A, Natural killer cell surface protein P1A

Source

Human CD161, Fc Tag (CD1-H5253) is expressed from human 293 cells (HEK293). It contains AA Gln 67 - Ser 225 (Accession # [Q12918-1](#)). Predicted N-terminus: Pro

Molecular Characterization

Fc(Pro 100 - Lys 330) P01857	CD161(Gln 67 - Ser 225) Q12918-1
---------------------------------	-------------------------------------

This protein carries a human IgG1 Fc tag at the N-terminus.

The protein has a calculated MW of 44.9 kDa. The protein migrates as 55-60 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM Glycine, 25 mM Arginine, 150 mM NaCl, pH7.5 . Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

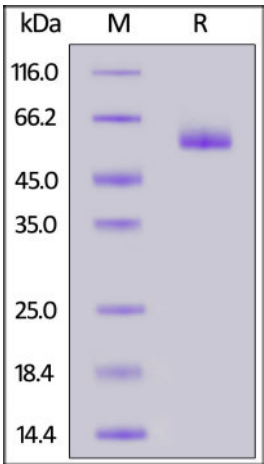
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70° C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human CD161, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Background

CD161 is also known as NKR-P1A, CLEC5B and KLRB1which plays an inhibitory role on natural killer (NK) cells cytotoxicity. Activation results in specific acid sphingomyelinase/SMPD1 stimulation with subsequent marked elevation of intracellular ceramide. Activation also leads to AKT1/PKB and RPS6KA1/RSK1 kinases stimulation as well as markedly enhanced T-cell proliferation induced by anti-CD3. Acts as a lectin that binds to the terminal carbohydrate Gal-alpha Gal epitope as well as to the N-acetyllactosamine epitope. Binds also to CLEC2D/LLT1 as a ligand and inhibits NK cell-mediated cytotoxicity as well as interferon-gamma secretion in target cells. New research shows that genetic inactivation of KLRB1 or antibody-mediated CD161 blockade enhances T cell-mediated killing of

glioma cells in vitro and their anti-tumor function in vivo. KLRB1 and its associated transcriptional program are also expressed by substantial T cell populations in other human cancers. The reference provides an atlas of T cells in gliomas and highlights CD161 and other NK cell receptors as immunotherapy targets.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.