

GPRC5D Protein, Human, Recombinant (His & FLAG), Detergent

General Information

Synonyms:	GPRC5D
Protein Construction:	A DNA sequence encoding the human GPRC5D (Q9NZD1) (Met1-Ser268) was expressed, with a Flag tag at the N-terminus and a polyhistidine tag at the C-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9NZD1
Molecular Weight:	32.83 kDa (predicted)

QC Testing

Biological Activity:	1. Immobilized Human GPRC5D Protein at 5 µg/mL (100 µL/well) on Nickel coated plate can bind Anti-Human GPRC5D Antibody, Human IgG1, the EC50 is 4.0 ng/ml (QC tested). 2. Loaded Anti-GPRC5D Antibody on Protein A Biosensor, can bind GPRC5D Protein with an affinity constant of 58.1 nM as determined in BLI assay (Routinely tested).
Purity:	≥ 80 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Supplied as solution in 10 mM HEPES, 50 mM NaCl, DDM, pH7.5 with glycerol as protectant. DDM is cytotoxicity and not suitable for cell based experiments. Never remove DDM as it is necessary to the activity of the protein. Do not store the protein without glycerol.

Preparation and Storage

Stability & Storage:

It is recommended to store the product under sterile conditions at -70°C or lower. Samples are stable for up to 3 months at -80°C. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Orphan G-protein-coupled receptor family C group 5 member D (GPRC5D) has seven transmembrane segments forming the core of the receptor, as well as an intracellular C-tail and an extracellular N-terminal domain. GPRC5D is highly and selectively expressed on the surface of CD138+ multiple myeloma (MM) cells, whereas in normal tissues, a much lower expression is limited to plasma cells and certain hard keratinizing tissues. This makes GPRC5D a promising marker for monitoring tumor load and a target antigen for MM-specific T cell-engaging therapies such as bispecific antibodies and CAR-T cells.

Reference

Eric L. Smith, et al. GPRC5D is a target for the immunotherapy of multiple myeloma with rationally designed CAR T cells. *Sci. Transl. Med.* 2019.

Christie, et al. Preclinical activity and determinants of response of the GPRC5DxCD3 bispecific antibody talquetamab in multiple myeloma. *Blood Adv* 2021.

Tatsushi Kodama, et al. Anti-GPRC5D/CD3 Bispecific T-Cell-Redirecting Antibody for the Treatment of Multiple Myeloma. *Mol Cancer Ther* 1 September 2019.

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