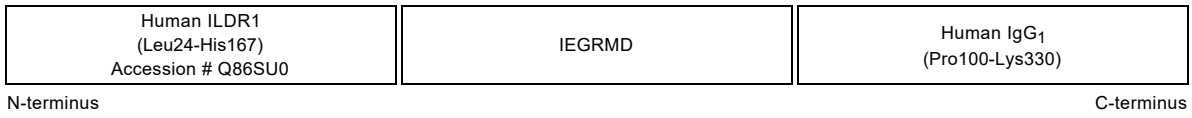
Recombinant Human ILDR1 Fc Chimera

Catalog Number: 10152-D1

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human ILDR1 protein



N-terminal Sequence Analysis	Leu24
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	43 kDa

SPECIFICATIONS

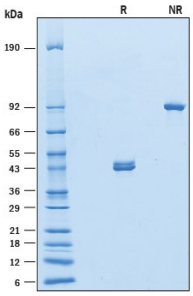
SDS-PAGE	40-49 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human ILDR1 Fc Chimera is immobilized at 2.5 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human ILDR2 Fc Chimera that produces 50% of the optimal binding response is 2-12 µg/mL
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after opening. • 3 months, -20 to -70 °C under sterile conditions after opening.

DATA

SDS-PAGE



2 µg/lane of Recombinant Human ILDR1 Fc Chimera (Catalog # 10152-D1) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 40-49 kDa and 80-100 kDa, respectively.

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BACKGROUND

Immunoglobulin-like domain containing receptor 1, or ILDR1, is a single pass Type I membrane protein that belongs to the immunoglobulin superfamily. Human ILDR1 contains a signal peptide (aa 1-23), an Ig-like V-type extracellular domain (aa 24-167), a helical transmembrane domain amino acids (aa168-188), and a cytoplasmic domain (aa 189-546) that contains a cysteine rich region and an arginine rich region (1). The extracellular domain of human ILDR1 shares a 96.5% homology with mouse and rat respectively. ILDR1 is mainly expressed in the prostate, with lower levels also found in testis, pancreas, heart and liver (1). ILDR1 has also been found expressed by intestinal cholecystokinin (CCK)-producing cells (2). ILDR1 has three splice variants. Two of those are expressed on the cell surface, while one is expressed in the cytoplasm, except when co-expressed with one of the other two splice variants. The cytoplasmic variant is the shortest transcript and is not found in healthy tissue, but only in lymphoma samples (1). It is suggested that ILDR1 plays a role in regulating intestinal hormone levels by stimulating release of CCK in response to fatty acids (2). Loss of function of ILDR1 is associated with Autosomal-Recessive Hearing Impairment (3). Our data shows that ILDR1 binds to human immunoglobulin-like domain containing receptor 2 (ILDR2).

References:

1. Hauge, H. *et al.* (2004) Biochem. Biophys. Res. Commun. **323**:970.
2. Chandra, R. *et al.* (2013) J. Clin. Invest. **123:**3343.
3. Borck, G. *et al.* (2011) Am. J. Hum. Genet. **88**:127.

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