Recombinant Human Protocadherin-12

Catalog Number: 8477-CA

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived Gln25-Ser705, with a C-terminal 6-His tag Accession # AAH52973
N-terminal Sequence Analysis	No results obtained.Gln25 inferred from enzymatic pyroglutamate treatment revealing Glu26
Predicted Molecular Mass	75 kDa

SPECIFICATIONS

SDS-PAGE	80-100 kDa, reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of HEK293 human embryonic kidney cells. The ED_{50} for this effect is 0.2-1.0 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE with silver staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in sterile 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, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Protocadherin-12 (PCDH12; also called VE-Cadherin-2) is an approximately 150 kDa glycoprotein belonging to the δ2 subgroup of non-clustered protocadherins. These are type I transmembrane proteins that exhibit calcium-dependent but relatively weak homophilic adhesion (1-4). Like other δ2 protocadherins, mature Protocadherin-12 contains six cadherin domains in its extracellular domain (ECD), a transmembrane sequence, and a cytoplasmic domain (1). Within the ECD, human Protocadherin-12 shares 83% and 82% amino acid sequence identity with mouse and rat Protocadherin-12, respectively. Protocadherin-12 is expressed in mouse endothelial, glycogen-rich trophoblast, and mesangial cells where it clusters at intercellular junctions (1, 2). It may be important during placental development, as placentas from Protocadherin-12-deficient mice display altered morphogenesis and transcription profiles (3). In humans, the ECD of Protocadherin-12 can be shed *via* proteolytic cleavage (5). It circulates at increased levels in sera from pregnant women exhibiting pre-eclampsia compared to women with nonpathological gestations (5).rich

References:

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3. Rampon, C. *et al.* (2008) Physiol. Genomics **34**:193.
4. Kim, S.Y. *et al.* (2011) Cell Adh. Migr. **5**:97.
5. Bouillot, S. *et al.* (2011) J. Biol. Chem. **286**:15195.

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