Data Sheet (Cat.No.TMPY-05656)

TargetMol

E-Cadherin/Cadherin-1 Protein, Human, Recombinant (hFc), Biotinylated

General Information

Synonyms:	E-Cadherin;CD324;Arc-1;UVO;E-cad;cadherin 1, type 1, E-cadherin (epithelial);LCAM;CDHE;CDH1;ECAD
Protein Construction:	A DNA sequence encoding the human E-Cad (P12830-1)(Met1-Ile707) was expressed with the Fc region of human IgG1 at the C-terminus. The purified protein was biotinylated in vitro. Predicted N terminal: Gln 23 & Asp 155
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P12830-1
Molecular Weight:	87.1 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Cadherins are calcium-dependent cell adhesion proteins which preferentially interact with themselves in a homophilic manner in connecting cells, and thus may contribute to the sorting of heterogeneous cell type. E-cadherin (E-Cad), also known as CDH1 and CD324, is a calcium-dependent cell adhesion molecule the intact

function of which is crucial for the establishment and maintenance of epithelial tissue polarity and structural integrity. Mutations in CDH1 occur in diffuse type gastric cancer, lobular breast cancer, and endometrial cancer. In human cancers, partial or complete loss of E-cadherin expression correlates with malignancy. During apoptosis or with calcium influx, E-Cad is cleaved by the metalloproteinase to produce fragments of about 38 kDa (E-CAD/CTF1), 33 kDa (E-CAD/CTF2) and 29 kDa (E-CAD/CTF3), respectively. E-Cad has been identified as a potent invasive suppressor, as downregulation of E-cadherin expression is involved in dysfunction of the cell-cell adhesion system, and often correlates with strong invasive potential and poor prognosis of human carcinomas.

Reference

Wang HD,et al.(2004) CDH1 germline mutation in hereditary gastric carcinoma. World J Gastroenterol. 10(21): 3088-93.

Masterson J,et al.(2007) Posttranslational truncation of E-cadherin and significance for tumour progression. Cells Tissues Organs. 185(1-3): 175-9.

Mrgineanu E,et al.(2008) Correlation between E-cadherin abnormal expressions in different types of cancer and the process of metastasis. Rev Med Chir Soc Med Nat Iasi. 112(2): 432-6.

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