

**DESCRIPTION**

**Source** Human embryonic kidney cell, HEK293-derived  
Asp155-Ile707, with a C-terminal 6-His tag  
Accession # P12830

**N-terminal Sequence Analysis** Asp155

**Structure / Form** Noncovalently-linked homodimer

**Predicted Molecular Mass** 61 kDa

**SPECIFICATIONS**

**SDS-PAGE** 74-92 kDa, reducing conditions

**Activity** Measured by the ability of the immobilized protein to support the adhesion of the MCF-7 human breast cancer cells.  
The ED<sub>50</sub> for this effect is 0.2-1 µg/mL

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >95%, 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**

E-Cadherin/Cadherin-1, also known as Uvomorulin in the mouse and rat, is a 120 kDa member of the Cadherin family of cell surface glycoproteins that mediate cell adhesion (1). Human E-Cadherin shares 81% amino acid sequence identity with the rat and mouse proteins (2). It is a single-pass transmembrane protein that mediates calcium-dependent epithelial cell adhesion. E-Cadherin has five extracellular EC domains that form homophilic cis-clusters between adjacent epithelial cells and trans-clusters within the same cell. E-Cadherin clusters are critical components of adherens junctions between epithelial cells and act in the formation and maintenance of the epithelial cell barrier (3, 4). The intracellular domain of E-Cadherin binds to the Catenin cytoskeletal complex, which includes p120 Catenin, beta-Catenin, alpha-Catenin, and Vinculin. E-Cadherin expression is critical for epithelial tissue homeostasis. Decreased E-Cadherin is associated with physiological and pathological epithelial-to-mesenchymal transition and cell migration, and E-Cadherin loss contributes to cancer metastasis (5). The extracellular E-Cadherin N-terminal domain can be cleaved by several proteases and is released as a soluble factor that enhances cancer cell motility and EGFR-dependent survival and proliferation (6).

**References:**

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3. Guillot, C. and T. Lecuit (2013) Science **340**:1185.
4. Tian, X. *et al.* (2011) J. Biomed. Biotechnol. **2011**:567305.
5. Stemmler, M.P. (2008) Mol. Biosyst. **4**:835.
6. David, J.M. and A.K. Rajasekaran (2012) Cancer Res. **72**:2917.