

**DESCRIPTION**

<b>Source</b>	Mouse myeloma cell line, NS0-derived			
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 33%;">Rat E-Cadherin (Gln 24-Ser704) Accession # Q9R0T4</td> <td style="width: 33%;">IEGRMDP</td> <td style="width: 33%;">Mouse IgG<sub>2A</sub> (Glu98-Lys330)</td> </tr> </table>	Rat E-Cadherin (Gln 24-Ser704) Accession # Q9R0T4	IEGRMDP	Mouse IgG <sub>2A</sub> (Glu98-Lys330)
Rat E-Cadherin (Gln 24-Ser704) Accession # Q9R0T4	IEGRMDP	Mouse IgG <sub>2A</sub> (Glu98-Lys330)		
	N-terminus <span style="float: right;">C-terminus</span>			

**N-terminal Sequence Analysis** Asp159 & No results obtained: Gln24 predicted

**Structure / Form** Disulfide-linked homodimer

**Predicted Molecular Mass** 103 kDa (pro monomer) & 87 kDa (mature monomer)

**SPECIFICATIONS**

<b>SDS-PAGE</b>	100-125 kDa, reducing conditions
<b>Activity</b>	Measured by the ability of the immobilized protein to support the adhesion of P19 mouse embryonal carcinoma cells. The ED <sub>50</sub> for this effect is 0.25-1.25 µg/mL
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE with silver staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 300 µg/mL in PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**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). Rat E-Cadherin shares 92% and 81% amino acid sequence identity with the mouse and human proteins, respectively (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 terminal domain can be cleaved by several proteases and is released as a soluble factor that enhances cancer cell motility and EGF R-dependent survival and proliferation (6).

**References:**

1. Gumbiner, B.M. (2005) Nat. Rev. Mol. Cell Biol. **6**:622.
2. Nagafuchi, A. *et al.* (1987) Nature **329**:341.
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.