**DESCRIPTION**

**Source**  
E. coli-derived  
Phe21-Gly104  
Accession # Q96QR1

**N-terminal Sequence Analysis**  
Phe21

**Predicted Molecular Mass**  
8.2 kDa

**SPECIFICATIONS**

**SDS-PAGE**  
6 kDa, reducing conditions

**Activity**  
Measured by the ability of the immobilized protein to support the adhesion of the A549 human lung carcinoma cells.  
The ED_{50} for this effect is 0.15-0.75 μg/mL.

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

**Purity**  
>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**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 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**

High in Normal-1 (HIN-1), also known as Uteroglobin related protein 2 (UGRP2), is an 8 kDa secreted protein of the secretoglobin superfamily (SCGB3A1) (1). HIN-1 is expressed in bronchial epithelial and secretory Clara cells, mammary epithelial cells (particularly during pregnancy), salivary glands, and the prostate (2-5). It is up-regulated in Clara cells by IL-4, IL-13, Oncostatin M, EGF, and TGF-α and down-regulated by IFN-α, β, and γ (6-9). It is secreted into bronchial lavage fluid, saliva, and plasma, and may form disulfide-linked dimers (10). HIN-1 binds to the macrophage scavenger receptor MARCO, and to the surface of mammary and bronchial epithelial cells (11, 12). HIN-1 promotes apoptosis and inhibits the proliferation, migration, and invasion of breast cancer cells (12). The down-regulation of HIN-1 expression in many breast, lung, and prostate cancers correlates with hypermethylation of its promoter (4, 10, 13, 14). Mature human HIN-1 shares 58% and 62% aa sequence identity with mouse and rat HIN-1, respectively (4).

**References:**