# Animal-Free TGF alpha/TGFA Protein, Human (His)

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| **Cat. No.:** | HY-P700149AF |
| **Synonyms:** | ETGF; TGF-alpha; TGF type 1; TGFA |
| **Species:** | Human |
| **Source:** | E. coli |
| **Accession:** | P01135 (V40-A89) |
| **Gene ID:** | 7039 |
| **Molecular Weight:** | Approximately 6.49 kDa |

## PROPERTIES

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| **AA Sequence** | M V V S H F N D C P D S H T Q F C F H G T C R F L V Q E D K P A C V C H S G Y V G A R C E H A D L L A |
| **Biological Activity** | Measure by its ability to induce 3T3 cells proliferation. The $ED_{50}$ for this effect is <0.2 ng/mL. The specific activity of recombinant human TGF alpha is > 5 x $10^6$ IU/mg. |
| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a solution containing 1X PBS, pH 8.0. |
| **Endotoxin Level** | <0.1 EU per 1 μg of the protein by the LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. |
| **Storage & Stability** | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| **Shipping** | Room temperature in continental US; may vary elsewhere. |

## DESCRIPTION

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| **Background** | The TGF alpha/TGFA protein, a mitogenic polypeptide, demonstrates the capacity to bind to the EGF receptor/EGFR and synergistically acts with TGF beta, facilitating anchorage-independent cell proliferation in soft agar. This protein interacts with the PDZ domains of MAGI3, SDCBP, and SNTA1, with the association with SDCBP being crucial for effective targeting to the cell surface. In its immature form within the endoplasmic reticulum, characterized by a prosegment and lacking full N-glycosylation, TGF alpha/TGFA interacts with CNIH. Furthermore, in the Golgi apparatus, it may form a complex with CNIH and GORASP2. Additionally, through its cytoplasmic C-terminal domain, TGF alpha/TGFA interacts with NKD2, thereby exhibiting a spectrum of potential functional roles in diverse cellular compartments and interactions. |

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA