



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human Cripto-1 Protein
Catalog Number: hRP-0544
Manufacturer: LD Biopharma, Inc.

Introduction

Human teratocarcinoma-derived growth factor 1 (Cripto-1) gene encodes an epidermal growth factor-related protein that contains a cripto, FRL-1, and cryptic domain. The encoded protein is an extracellular, membrane-bound signaling protein that plays an essential role in embryonic development and tumor growth. Mutations in this gene are associated with forebrain defects. Recent data indicated that human Cripto-1 protein plays a role in the determination of the epiblastic cells that subsequently give rise to the mesoderm.

Full-length mature human Cripto-1 cDNA (31-150aa, isoform-1, derived from BC067844) was constructed with codon optimization with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein was expressed in *E. coli* as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol:	Cripto-1 (TDGF1; CR; CRGF)
Accession Number:	NP_003203
Species:	Human
Size:	20 µg / Vial
Composition:	0.2 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage:	In Liquid. Keep at -20°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

De Luca,A., et al., *Expression and functional role of CRIPTO-1 in cutaneous melanoma.*



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Br. J. Cancer 105 (7), 1030-1038 (2011)

Brandt,R., et al., *Identification and biological characterization of an epidermal growth factor-related protein: cripto-1*. J. Biol. Chem. 269 (25), 17320-17328 (1994)

Watanabe,K. et al., *Intercellular transfer regulation of the paracrine activity of GPI-anchored Cripto-1 as a Nodal co-receptor*. Biochem. Biophys. Res. Commun. 403 (1), 108-113 (2010)

Applications

1. May be used for in vitro Cripto-1/Nodal signaling pathway regulations study for mesoderm differentiation.
2. Potential biomarker protein for various cancer diagnostic developments.
3. May be used as antigen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.
2. Activity: Measured by its binding ability in a functional ELSA. Immobilized recombinant human Nodal protein at 2ug/ml (100ul/well) can bind rhCripto-1 with a linear range of 0.5-100 ng/ml.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFLGHQEFARPSRGYLAFRDDSIWPQEEPAIRPRSSQ
RVPPMGIQHSEKLNRTCCLNGGTCMLGSEFCACPPSFYGRNCEHDVRKENCGSVPHDTWLPPKKCS
LCKCWHGQLRCFPQAFLPGCD