

## GD12 Protein, Human (P.pastoris, His)

<b>Cat. No.:</b>	HY-P71737
<b>Synonyms:</b>	GDI-2; GDP dissociation inhibitor 2; Guanosine diphosphate dissociation inhibitor 2; Rab GDI beta; RABGDIB
<b>Species:</b>	Human
<b>Source:</b>	P. pastoris
<b>Accession:</b>	P50395 (1M-445D)
<b>Gene ID:</b>	2665
<b>Molecular Weight:</b>	Approximately 52.7 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>M N E E Y D V I V L    G T G L T E C I L S    G I M S V N G K K V    L H M D R N P Y Y G</p> <p>G E S A S I T P L E    D L Y K R F K I P G    S P P E S M G R G R    D W N V D L I P K F</p> <p>L M A N G Q L V K M    L L Y T E V T R Y L    D F K V T E G S F V    Y K G G K I Y K V P</p> <p>S T E A E A L A S S    L M G L F E K R R F    R K F L V Y V A N F    D E K D P R T F E G</p> <p>I D P K K T T M R D    V Y K K F D L G Q D    V I D F T G H A L A    L Y R T D D Y L D Q</p> <p>P C Y E T I N R I K    L Y S E S L A R Y G    K S P Y L Y P L Y G    L G E L P Q G F A R</p> <p>L S A I Y G G T Y M    L N K P I E E I I V    Q N G K V I G V K S    E G E I A R C K Q L</p> <p>I C D P S Y V K D R    V E K V G Q V I R V    I C I L S H P I K N    T N D A N S C Q I I</p> <p>I P Q N Q V N R K S    D I Y V C M I S F A    H N V A A Q G K Y I    A I V S T T V E T K</p> <p>E P E K E I R P A L    E L L E P I E Q K F    V S I S D L L V P K    D L G T E S Q I F I</p> <p>S R T Y D A T T H F    E T T C D D I K N I    Y K R M T G S E F D    F E E M K R K K N D</p> <p>I Y G E D</p>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
<b>Endotoxin Level</b>	<1 EU/μg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	The GD12 Protein acts as a GDP-dissociation inhibitor, preventing the exchange of GDP to GTP for most Rab proteins and
-------------------	--

---

thereby regulating intracellular membrane trafficking. By maintaining these small GTPases in their inactive GDP-bound form, GDI2 plays a crucial role in modulating cellular processes. It serves as a negative regulator of protein transport to the cilium and ciliogenesis by inhibiting RAB8A. GDI2 interacts with RHOH and the GDP-bound forms of various Rab proteins, including RAB3A, RAB3B, RAB3C, RAB5A, RAB5B, RAB5C, RAB8B, RAB10, RAB12, RAB35, and RAB43, with a lesser extent of binding to RAB3D. Furthermore, it interacts specifically with the GDP-bound inactive form of RAB8A, preventing its activation. The protein also interacts with DZIP1, negatively regulating the interaction between GDI2 and GDP-bound RAB8A. These interactions highlight the intricate regulatory role of GDI2 in governing membrane trafficking and cellular transport processes.

---

**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](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA