

Cpn10 Protein



TECHNICAL SPECIFICATIONS

5777 Hines Drive, Ann Arbor, MI 48108 USA Toll free (800) 833-8651 Fax (734) 668-2793 www.stressgenbioreagents.com technical@assaydesigns.com

Recombinant Human Chaperonin 10 (Cpn10) Protein Product #: SPP-110

Scientific Background

Chaperonin 10 (Cpn 10), is the ~10kD mammalian equivalent to GroES of *E.coli*. Chaperonins (1) play fundamental roles in the folding, assembly, and translocation of other proteins (2, 3). Chaperonin function *in vivo* requires two distinct family members, Cpn60 and Cpn10, both of which are also present in chloroplasts and mitochondria. The best studied Cpn60 and Cpn10, are the GroEL and GroES proteins of *E. coli*, respectively. Cpn10 and Cpn60 both exhibit sevenfold axis of symmetry and function as a team in the protein folding and assembly processes (2, 3). Chaperonin 10 has been located in human platelets but more importantly it may also be present in human maternal serum (4, 5). It has been reported (5) that human Cpn10 is identical with early pregnancy factor (EPF), which is involved in control over cell growth and development. This identification suggests that Cpn10 may act like a hormone in stressful situations such as pregnancy.

Application Note:

On a 15-well minigel system, 100ng of protein per lane should be sufficient when used in a colorimetric Western blot with Stressgen antibody SPA-110.

References:

1. Hemmingsen, S.M., Woolford, C., van der Vies, S., Tilly, K., Dennis, D.T., Georgopoulos, C., Hendrix, R.W., & Ellis, R.J. (1988) *Nature* **333**: 330-334.
2. Gething, M.-J., and Sambrook, J. (1992). *Nature* **355**: 33-45.
3. Gatenby, A.A. and Viitanen, P.V. (1994) *Annu. Rev. Plant Physiol. Plant Mol. Biol.* **45**: 469-491.
4. Morton, H., Hegh, V., and Clunie, G.J.A. (1974) *Nature (London)* **249**: 459-460.
5. Cavanagh, A.C., and Morton, H. (1994) *Eur. J. Biochem.* **222**: 551-560.

Rev: 07/11/06

CERTIFICATE OF ANALYSIS

Cpn10 Protein

Product #: SPP-110

Lot #:

Format: Human Cpn10 in 20mM Tris, pH 8.0, 150mM NaCl.

Purity: This protein is >90% pure as determined by SDS-PAGE analysis.

Concentration: 1.0 mg/mL

STORAGE & SHIPPING: Store frozen product at or below -70°C. Thawed product may be stored for 2-4 weeks at 4°C. For optimal storage, aliquot to smaller portions and store at -70°C. Avoid repeated freeze/thaw cycles. For maximum product recovery, after thawing, centrifuge the product vial before removing cap. Shipped on gel packs.



FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES: This product is not to be used for diagnostic nor therapeutic purposes. By accepting this product, the user confirms that it will be used for research purposes only. Stressgen warrants that its products conform to the information published by Stressgen. Purchaser must determine the suitability of the product for their particular use. Please refer to the MSDS for product safety information.

MATERIAL SAFETY DATA SHEET

Section 1 - Product Identification and Use

Product Name: Human Chaperonin 10 (cpn10) Protein

Product#

SPP-110

This product is sold only for research use by qualified laboratory personnel, and is not to be used as a drug, medical device, food additive, cosmetic, nor household chemical. It is not to be used in diagnostic, therapeutic, consumer, agricultural, nor pesticidal applications.

Manufacturer's Name: Stressgen Bioreagents Corporation
Street Address: 5777 Hines Drive
City, State, Zip Code: Ann Arbor, MI 48108 USA
Phone: (800) 833-8651 (Toll Free in North America)
Fax: (734) 668-2793

Section 2 - Hazardous Ingredients

NOT AVAILABLE. We are not aware of any hazards associated with this product or its ingredients, but the chemical, physical, and toxicological properties of this product have not been investigated thoroughly. Observe normal laboratory precautions.

Section 3 - Physical Data

This product consists of purified protein in Tris shipped on gel packs (dry ice overseas). The physical properties of this product have not been investigated thoroughly.

Section 4 - Fire and Explosion Hazard

NOT APPLICABLE

Section 5 - Reactivity Data

NOT APPLICABLE

Section 6 - Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Section 7 - Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

*****MULTIPLE COMPONENT SPILL OR LEAK PROCEDURES*****

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

Section 8 - First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.

Section 9 - Preparation

Prepared by: SBC	Phone#: (734) 668-6113 Toll Free in North America: (800) 833-8651	Created: 09/14/01	Modified: 07/11/06
---------------------	---	----------------------	-----------------------

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Stressgen shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.