PRODUCT DATA SHEET

Revised: 29 January 2009
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Product name(s):	PAC2 (proteasome assembling chaperone-2), mouse monoclonal antibody [clone EX-6]

Product code:	PW0485	Batch number:		Expiry date:	12 months from receipt

Product information:

The assembly of mammalian 20S proteasomes is an ordered multi-step process, starting from α-ring formation with the help of proteasome-specific chaperones named PAC1 (proteasome assembling chaperone-1) and PAC2[1]. The PAC1-PAC2 heterodimer promotes assembly of α-subunits into the heteroheptameric α-ring whilst preventing unwanted dimerization of α-rings prior to 20S proteasome maturation and subsequent degradation of the PAC1-PAC2 chaperone proteins in a proteasome-dependent manner[2]. Overexpression of PAC1 or PAC2 accelerates the formation of precursor proteasomes, whereas knockdown by short interfering RNA impairs it, resulting in poor maturation of 20S proteasomes[1].

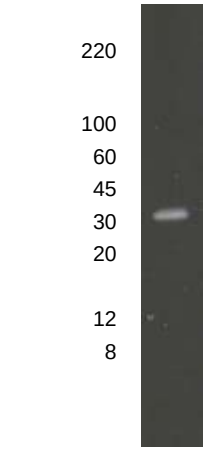
PAC2 is also known as hepatocellular carcinoma associated gene 3 (HCCA3) who's overexpression may play an important role in the development and/or progression of hepatocellular carcinoma[3].

The hybridoma secreting the PAC2 antibody PW0485 [clone EX-6] was generated by fusion of splenocytes from Balb/c mice that had received repeated immunisation with recombinant human PAC2 (accession number: Q969U7). Immunoglobulin was purified from tissue culture supernatant by ion exchange chromatography.

Immunoglobulin type: IgG_{2a}. PW0485 has been characterised by Western blotting and immunoprecipitation.

Immunoblotting
An initial dilution of at least 1:1000 is recommended.

Species reactivity
Recognises human PAC2 protein.



Detection of PAC2 protein in HeLa S100 cytosolic fraction (SW8750, 10µg) by Western blotting using PW0485 at 1:1000 dilution.

Storage and use:

Vial contains 1mg/mL purified immunoglobulin (IgG_{2a}), suspended in phosphate-buffered saline (PBS) containing 0.09% sodium azide. Store unopened vial at -80°C until required for use. AVOID REPEATED FREEZE-THAW CYCLES. Aliquot once thawed prior to re-freezing. The use of high quality 'antiserum-grade' plastic or glass vials is recommended. Store diluted antibody at 4°C (do not freeze) and use within 1 month. Dilute to working strength with PBS, pH 7.2-7.4 and 1% normal goat serum (if a goat anti-mouse IgG linker antibody is to be used).

References:

1. Hirano, Y., Hendil, K. B., Yashiroda, H., Iemura, S., Nagane, R., Hioki, Y., Natsume, T., Tanaka, K., and Murata, S. A heterodimeric complex that promotes the assembly of mammalian 20S proteasomes. *Nature*. **437**, 1381-1385 (2005)
2. Hirano, Y., Hayashi, H., Iemura, S., Hendil, K. B., Niwa, S., Kishimoto, T., Kasahara, M., Natsume, T., Tanaka, K., and Murata, S. Cooperation of multiple chaperones required for the assembly of mammalian 20S proteasomes. *Mol.Cell*. **24**, 977-984 (2006)
3. Wang, Z.X., Hu, G. F., Wang, H. Y., and Wu, M. C. Expression of liver cancer associated gene HCCA3. *World J.Gastroenterol.* **7**, 821-825 (2001)
4. Bonsing, B.A., Corver, W. E., Gorsira, M. C., van, V. M., Oud, P. S., Cornelisse, C. J., and Fleuren, G. J. Specificity of seven monoclonal antibodies against p53 evaluated with Western blotting, immunohistochemistry, confocal laser scanning microscopy, and flow cytometry. *Cytometry*. **28**, 11-24 (1997)