Product Name Monoclonal Mouse Anti-hRRP4 Immunoglobulin, clone 15B3

CAT No.

MQ 2.103-100

LOT. No. TD2.103-0410-06

Quantity

100 µg

Edition February 1, 2012

Intended use

This product is for research use only. <u>NOT for use in</u> diagnostic or therapeutic procedures.

This product is tested for use in enzyme-linked immunosorbent assay (ELISA), immunoblotting (IB) or immunoprecipitation (IP).

Reagent provided

The antibody has been lyophilized in a 10 mM ammonium bicarbonate buffer. Each vial contains 2 mg BSA.

Isotype

Mouse IgG1

Immunogen

Recombinant GST-hRRP4 (NCBI accession number NM_014285 REGION 3-884, expression vector pGEX-4T3), expressed in *E.coli*. Synonyms for RRP4; p7, EXOSC2, Rrp4p

Specificity

Specificity has been tested in ELISA (figure 1). Additional tests for cross reactivity have not yet been performed.

Purity

Protein A purified.

Precautions

- 1. For professional users.
- As with any product derived from biological sources, proper handling procedures should be used.
- The product may be used in different techniques and in combination with different sample types and materials, therefore each individual laboratory should validate the applied test system.

Preparation of the antibody

- Recommended antibody concentration: 0.5 mg/ml (when dissolved at 0.5 mg/ml, the BSA concentration will be 1%).
- Recommended solvent; 100 mM PBS or Tris-HCl, pH 7.0
- Additional sodium azide (up to 0.05%) is recommended for long term storage.
- For a 0.5 mg/ml antibody concentration in 1% BSA, dissolve in 200 µl buffer.

<u>NOTE:</u> Be careful opening the vial since the antibody resides in a vacuum.

Storage instructions

Dissolve the antibody and store at 2-8°C.

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Dilution guidelines

ELISA: 1:(4000 x F) – 1:(6000 x F).

<u>IB: 1:(500 x F)</u>. Predicted molecular weight: 33 kDa.

Other applications: since applications vary, you should determine the optimum working dilution of the product that is appropriate for your specific need.

For the value of the multiplication factor F, see label on vial. Unless the stability in the actual test system has been established, it is recommended to dilute the product immediately before use.

Relevance

The exosome, present in both the nucleus and cytoplasm of all eukaryotic cells, is a complex of 3'-5' exoribonucleases containing at least nine core components. Recently, it has been demonstrated, mainly by analyses in yeast, that the nuclear exosome is essential for rRNA processing and sn(o)RNA biogenesis. Furthermore, it is involved in the degradation of improperly processed mRNAs. The cytoplasmic exosome participates in normal mRNA turnover and in the degradation of inherently instable mRNAs that contain AU-rich elements. Therefore, the exosome plays a key role in RNA metabolism.



Figure 1: Specificity of anti-hRRP4 Immunoglobulin, clone 15B3, determined by ELISA. Antibody fraction (0.5 mg/ml) 6000X diluted in PBS containing 0,05% tween-20 and 5% non fat dry milk. Antibody was tested on various recombinant protein substrates i.e. hRpp14-GST (pGEX-2T), hRrp46-HIS10 (pET16b), GST (pGEX-2T) and BSA, 98% (Sigma). Product Name Monoclonal Mouse Anti-hRRP4 Immunoglobulin, clone 15B3

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Figure 2: Specificity of anti-hRRP4 Immunoglobulin, clone 15B3, determined by immunoblot analysis. Blot contains total cell extract of HEp2 cells. Incubated with antibody fraction (0.5 mg/ml) 500X diluted in PBS containing 0,05% tween-20 and 5% non fat dry milk.

References

- 1. Raijmakers et al. The exosome, a molecular machine for controlled RNA degradation in both nucleus and cytoplasm. Eur J Cell Biol. 2004 Jul;83(5):175-83.
- Staals et al. Dis3-like 1: a novel exoribonuclease associated with the human exosome. EMBO J. 2010 Jul 21;29(14):2358-67.

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