## Hsp90α-specific antibodies

Many companies claim to sell  $Hsp90\alpha$ -specific antibodies, but few of them actually are! The four columns on the right, with headers highlighted in salmon color, contain information based on our own experience. Our favorites are the top two (names in red).

| Name of antibody     | Commercial source (example)   | Antibody<br>type     | Immunogen                                     | Specific<br>with<br>human KO<br>cell lines | Specific<br>with <i>E. coli</i> -<br>made<br>Hsp90s | Recognition of mouse Hsp90α | Our comments  |
|----------------------|-------------------------------|----------------------|---|--|---|-----------------------------|---|
| ADI-SPA-840<br>(9D2) | Enzo Life<br>Sciences         | Rat<br>monoclonal    | Hsp90α from<br>human sample                   | yes  | yes   | no!!!                       | against human and chicken Hsp $90\alpha$ ; great monoclonal, but really does <b>not</b> recognize mouse Hsp $90\alpha$ at all |
| 380 003              | SYSY<br>(Synaptic<br>Systems) | Rabbit<br>polyclonal | Synthetic<br>peptide of AA<br>701-717         | yes  | not tested  | yes                         | works well  |
| PA3-013              | Thermo Fisher<br>Scientific   | Rabbit<br>polyclonal | Synthetic<br>peptide of AA 2-<br>12 of Hsp90α |  | not specific for<br>Hsp90α                          | yes                         | multiple aliquots/sources tested;<br><b>not</b> $\alpha$ -specific (anymore?) despite absolutely $\alpha$ -specific epitope   |
| EMD-17D7             | Merck                         | Mouse<br>monoclonal  | Recombinant<br>human Hsp90α                   | yes  | yes   | yes                         | looks fine; also recognizes yeast<br>Hsp90 (Hsp82?)   |
| 2G5G3 / SMC-<br>147  | Abcam,<br>StressMarq          | Mouse<br>monoclonal  | Recombinant<br>human Hsp90α                   |  | yes   | yes                         | looks fine  |
| 4F3.E8 / SMC-<br>149 | Abcam,<br>StressMarq          | Mouse<br>monoclonal  | Human Hsp90α<br>from E. coli                  |  | not specific for<br>Hsp90α                          | yes                         | both $\alpha$ and $\beta$ (plus some nonspecific bands in bacterial extract)  |
| K41009 /<br>SMC-108  | StressMarq                    | Mouse<br>monoclonal  | Recombinant human $Hsp90\alpha$               |  | yes   | yes (weaker)                | epitope mapped to AA 604-732;<br>looks fine   |
| D7α<br>(ab59459)     | Abcam                         | Mouse<br>monoclonal  | Chicken Hsp90                                 |  |   |                             | weak?   |

| ADI-SPS-771 | Enzo Life<br>Sciences | Rabbit<br>polyclonal | Peptide corresponding to portion of mouse $Hsp90\alpha$ |  | <b>not</b> specific for Hsp $90\alpha$ | yes | both $\alpha$ and $\beta$ ; antibody may be similar/identical to PA3-013 |
|-------------|-----------------------|----------------------|---|--|--|-----|--|
|-------------|-----------------------|----------------------|---|--|--|-----|--|

## Hsp90β-specific antibodies

There are probably several more, but since H90-10 is such a fantastic antibody, look no further!

| Name of antibody | Commercial source (example)             | Antibody<br>type         | Immunogen    | Specific<br>with<br>human KO<br>cell lines | Specific<br>with <i>E. coli</i> -<br>made<br>Hsp90s | Recognition<br>of mouse<br>Hsp90β | Our comments   |
|------------------|---|--------------------------|--------------|--|---|-----------------------------------|--|
| H90-10           | Abcam,<br>Thermo Fisher,<br>many others | Mouse<br>monoclonal      | Human Hsp90β | yes  | yes   | yes                               | Epitope might be charged region; does not recognize yeast Hsp90  |
| H90-10 ScFv      | Geneva<br>Antibody<br>Facility          | Single-chain<br>antibody |              | yes  | yes   | yes                               | This is a single-chain antibody with the antigen-binding scFv (variable region identical to the original H90-10) fused to the Fc region of, for example, mouse IgG2a. Ref.: Abboud et al. (2021) Antibody Reports 4, e285. |