

Antibody (Ab) / Antikörper (AK) Establishment @ CEP

We also offer the establishment of antibodies (Ab). For this, a regular project number (= E-number (see our "SOP submission") must always be assigned.

Please note "Ab establishment + *name of antibody*" as the project title on the E-form.

Good antibodies can be found via literature or internet search.

We generally recommend the Biocompare website (https://www.biocompare.com/pfu/110447/soids/3686-872549/Antibodies/Immunohistochemistry_Antibodies) :

- Various parameters (e.g., host species, reactivity species, clonality) can be selected on the left-hand side. For immunohistochemistry (IHC) on FFPE tissue, please always select **"Immunohistochemistry-fixed" or "IHC-P" (IHC-Paraffin)**
- For mouse tissues, preferably select Rabbit antibodies, but always a host animal species different from target tissue species (see figure on the right).
- Monoclonal (high specificity & affinity, low avidity) Ab is preferred over polyclonal Ab (specificity and affinity variable/higher avidity).

Further search options: Citeab, Antibodypedia

We are happy to assist with finding the right antibody and recommend discussing with us **before** you order!

In general, you are responsible for buying the antibody that you will then provide for us to use for establishment and immunostainings. When billing the performed CEP services, we will grant you credit for the provided antibody.

Bring the labeled antibody (best: entire vial, min. 20 µl) + associated Ab datasheet (not the safety data sheet; either included in the delivery or available on the supplier's homepage) to our office during opening hours. Please ensure proper cooling until the antibody arrives in our lab.

If you want to send the antibody, please inform us about the shipment by e-mail, stating the e-number in the e-mail subject as soon as you order. Have the antibody delivered to:

Institute of Pathology TUM
Comparative Experimental Pathology
c/o Petra Hauke, room 0.02
Trogerstr. 18
81675 Munich

Ideally, you should also provide us with positive and negative control tissue (preferably blocks; also possible: empty sections, mounted on Superfrost Plus slides, 2 µm). For certain antibodies (e.g., phosphorylated targets) cell pellets (+ and -) are preferred. We are happy to provide a cell pellet protocol (write to cep@mh.tum.de).

Regular mouse and human normal tissue are usually available in our laboratory. **The establishment of a new antibody can vary from 2 weeks to several months, depending on Ab performance*.**

Of note: In our lab, we work with automated IHC staining systems, we **do not perform manual IHC**. The success of the establishment therefore also depends on the compatibility of the antibody staining requirements with the protocols available on our machines.

***What defines a good antibody performance?**

- *molecular specificity: specificity for the molecular structure of the epitope*
- *diagnostic specificity: positivity only in the expected cell compartment/cell type/tissue? -> „false positive“ /cross-reactivity -> comparison with other antibodies or different methods (Western Blot/PCR)*
- *analytical sensitivity: minimal amount of antibody, which still produces a positive reaction/stain (polyclonal ab can be more sensitive than monoclonal ab)*
- *diagnostic sensitivity: do all expected cell types/tissues stain positive?*

The screenshot shows a search filter interface for antibodies. It includes several sections with checkboxes and dropdown menus:

- Method:** Western Blot (102), ELISA (9), Flow Cytometry (31), Immunohistochemistry (63), Immunohistochemistry - fixed (32), Immunohistochemistry - ...
- Host Species:** Rabbit (32), Mouse (435), Rat (22), Goat, Chicken/Bird, Guinea Pig
- Reactivity:** Human (84), Mouse (32), Rat (29), Bovine (2), Porcine (2), Rabbit (2)
- Clonality:** Monoclonal (32), Polyclonal (2184)
- Modification Type:** Phosphorylated, Acetylated

Each section has an "Apply Changes" button and a search bar.