

# - Quick users' guide

## THE HUMAN PROTEIN ATLAS

SEARCH 7 »

SEARCH Fields »

e.g. insulin, PGR, CD36

### A Tissue-Based Map of the Human Proteome

Here, we summarize our current knowledge regarding the human proteome mainly achieved through antibody-based methods combined with transcriptomics analysis across all major tissues and organs of the human body. A large number of lists can be accessed with direct links to gene-specific images of the corresponding proteins in the different tissues and organs. [Read more](#)

### The Atlas of the Mouse Brain

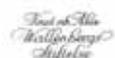
The Mouse Brain Atlas is an addition to the Human Protein Atlas presented as an interactive database with fluorescent images revealing protein distribution on a cellular and subcellular level in the mammalian brain. The virtual microscope gives the possibility to view image-data with macroscopic and microscopic resolution. [Read more](#)

**TISSUE ATLAS**   **SUBCELL ATLAS**   **CELL LINE ATLAS**   **CANCER ATLAS**

Version: 14  
Atlas updated: 2015-10-16  
[Release history](#)

Transcriptome analysis based on 217 tissue and cell line samples.  
Proteome analysis based on 25039 antibodies targeting 17005 unique proteins.

fiber specific expression of myosin, light chain 3 in skeletal muscle

 The Human Protein Atlas project is funded by the Knut & Alice Wallenberg foundation.

[proteingatlas.org](http://proteingatlas.org)

 **ATLAS ANTIBODIES**

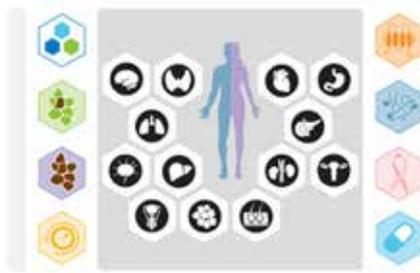
[atlasantibodies.com](http://atlasantibodies.com)

# ATLAS ANTIBODIES

## A quick users' guide to the Human Protein Atlas

### Tissue-Based Map

The first section of the start page of the Human Protein Atlas (HPA) is an entry into a tissue-based map of all human proteins. The tissue-based map summarizes the expression profiles of all human proteins presented as different chapters with genes categorized into tissue-specific sections.



[proteinatlas.org](http://proteinatlas.org)

### Enter HPA via your favorite gene

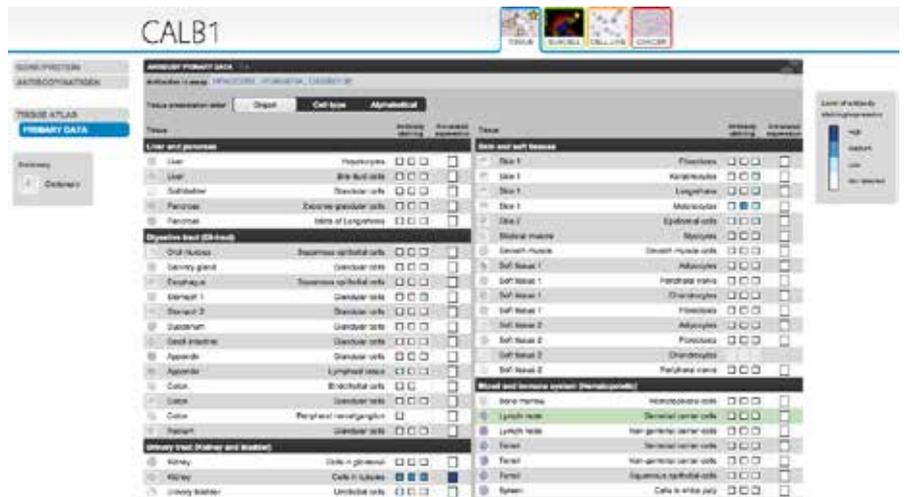
Each human gene has its own page on the Human Protein Atlas. For example, by writing CALB1 in the search field you will enter the CALB1 page.



All sections have question marks with further information (click on the question mark near the section header).

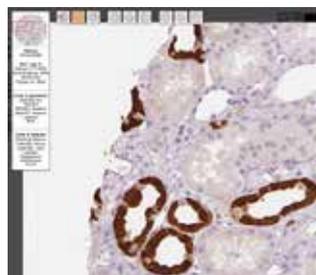
### Primary data page

In the upper left menu on the CALB1 page, there is information about the CALB1 gene, CALB1 protein and about the antibodies used for the analysis.



On the TISSUE atlas page for CALB1, RNA expression data in different tissues is presented as purple bars and knowledge-based annotation of protein expression as blue bars. From that page you can go directly to the IHC primary data page.

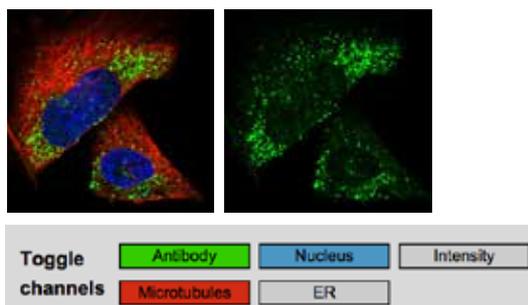
On the primary data page, IHC images from the CALB1-antibodies in 44 normal tissues are presented. These can be viewed in high resolution by clicking on the images, as exemplified by the image in kidney tissue using Anti-CALB1 antibody HPA023099.



In the upper right corner, you can also enter the CANCER and CELL LINE atlas with IHC stainings in 20 different cancer tissues, cells and cell lines.

### Subcellular Atlas

By clicking on SUBCELL, you will enter the subcell-atlas for CALB1 where IF images are shown for one or several of the antibodies in three different cell lines. Click on the different channels to modify the visualization of the staining (click on the blue **Nucleus** square and the red **Microtubules** to visualize only the antibody staining in green).



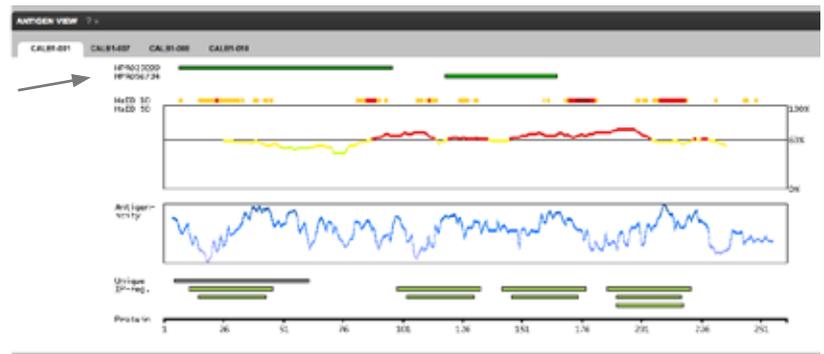
## Antibody/Antigen page

If you go to the Antibody/Antigen-page (upper left) you can learn about the antibodies used for the CALB1 analysis.

On this page, you will find a link to the provider of the antibody, the antigen sequence, the performance of the antibody in a standardized WB setup and an antibody specificity test by protein array.

## Antigen view

In the bottom of the Antibody/Antigen page, the antigen positions of the corresponding antibodies on the protein target (CALB1 in this case) are visualized as green horizontal bars. By clicking the different transcript tabs and then placing your marker over the green bar, you will find the exact amino acid positions for each isoform. The yellow-red curve illustrates the sequence identity to other human proteins. The antigen sequence is chosen to have as low identity as possible to other proteins and to avoid transmembrane regions and signal peptides.



## Dictionaries

On the "About" page (in the upper right hand corner of the Human Protein Atlas), there is information about the HPA project, data validation, scoring and experimental procedures.

In addition, there is a "learn" section with dictionaries serving as a tool for training and understanding tissue histology, pathology and cell biology (click **Dictionaries**).

# THE HUMAN PROTEIN ATLAS

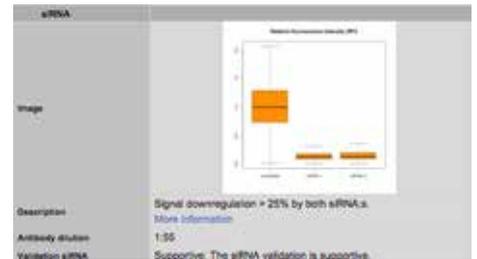
ABOUT HELP BLOG

## New Features HPA14

In October 2015, a new version of the Human Protein Atlas was launched, covering more than 17,000 human proteins. New features in the HPA14 release include additional validation for some antibodies using siRNA (for validation of ICC-IF and WB results), validation of subcellular data using colocalization of the antibody staining and the corresponding GFP-tagged protein, as well as a Human Protein Atlas blog and the Atlas of the Mouse Brain described below.



Colocalization of HPA006286 with GFP-tagged protein.



siRNA validation of ICC-IF signal using HPA046290.

## The Atlas of the Mouse Brain

The Atlas of the Mouse Brain project is a new addition to the Human Protein Atlas aiming to increase the knowledge of protein expression and distribution in the mammalian nervous system. The Mouse Brain Atlas presents antibody stainings on consecutive sections of the entire mouse brain.

The project now contributes with annotated protein expression in various cell types in 129 mouse brain regions and subfields. The first version of the Mouse Brain Atlas includes 88 genes.

The Atlas of the Mouse Brain can be reached directly from the start page of

the Human Protein Atlas, and through the gene pages in the Tissue Atlas section under the subsection Mouse Brain.

MAP2

GENE/PROTEIN  
ANTIBODY/ANTIGEN  
TISSUE ATLAS  
PRIMARY DATA  
MOUSE BRAIN  
Dictionary

MOUSE BRAIN TISSUE

Gene description: Microtubule-associated protein 2  
Human tissue RNA category: Tissue enriched (cerebral cortex)  
Mouse gene: ENSMUSEG00000019222 (version 78)  
Annotation summary: Immunoreactivity observed in neuronal cell bodies and dendrites in various areas of the brain.  
Positive cells and structures: Soma and dendrite in neurons.  
Reliability: Supportive

Human cerebral cortex, Lateral septum, Globus pallidus, CA1 of hippocampus, Facial nucleus, Cerebral cortex

Screenshot of the MAP2 gene as shown on the Human Protein Atlas. The Mouse Brain subsection of the MAP2 database entry section shows MAP2 protein expression profiles in the mouse brain.