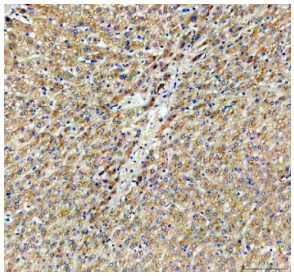
# CYP26B1 Antibody / Cytochrome P450 26B1 (FY13120)

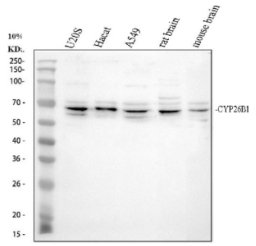
| Catalog No. | Formulation | Size |
|---|---|---|
| FY13120 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

**Bulk quote request**

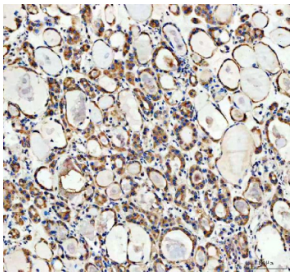
| | |
|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Lyophilized |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **UniProt** | Q9NR63 |
| **Localization** | Cytoplasm (ER) |
| **Applications** | Western Blot: 0.25-0.5ug/ml<br>Immunohistochemistry: 2-5ug/ml<br>Immunocytochemistry/Immunofluorescence: 5ug/ml<br>Flow cytometry: 1-3ug/million cells<br>ELISA: 0.1-0.5ug/ml |
| **Limitations** | This CYP26B1 antibody is available for research use only. |



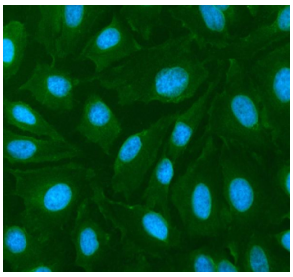
Immunohistochemical staining of CYP26B1 using anti-CYP26B1 antibody. CYP26B1 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CYP26B1 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



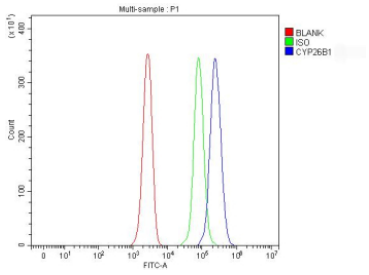

Western blot analysis of CYP26B1 using anti-CYP26B1 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human U2OS whole cell lysates, Lane 2: human Hacat whole cell lysates, Lane 3: human whole cell lysates, Lane 4: rat brain tissue lysates, Lane 5: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CYP26B1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substratewith Tanon 5200 system. CYP26B1 antibody detects a predominant band at ~65 kDa in the indicated samples, with lighter bands just above and below. Although the predicted mass is ~58 kDa, ER-anchored cytochrome P450s often migrate slower on SDS-PAGE due to their transmembrane N-terminus. The closely spaced bands are consistent with differential phosphorylation and minor N-terminal processing.



Immunohistochemical staining of CYP26B1 using anti-CYP26B1 antibody. CYP26B1 was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CYP26B1 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Immunofluorescent staining of CYP26B1 using anti-CYP26B1 antibody (green). CYP26B1 was detected in an immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-CYP26B1 antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.




Flow Cytometry analysis of JK cells using anti-CYP26B1 antibody. Overlay histogram showing JK cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CYP26B1 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

## Description

CYP26B1 antibody detects Cytochrome P450 26B1, a retinoic acid-metabolizing enzyme that controls tissue-specific retinoid signaling. The UniProt recommended name is Cytochrome P450 26B1 (CYP26B1). This enzyme belongs to the cytochrome P450 superfamily and catalyzes the hydroxylation and inactivation of all-trans-retinoic acid, maintaining its spatial and temporal concentration during development.

Functionally, CYP26B1 antibody identifies a 512-amino-acid endoplasmic reticulum membrane protein containing a heme-binding domain essential for oxidative metabolism. CYP26B1 converts retinoic acid into hydroxylated metabolites such as 4-hydroxy-retinoic acid and 18-hydroxy-retinoic acid. This reaction ensures proper morphogen gradients required for

organ patterning, skeletal formation, and germ cell development.

The CYP26B1 gene is located on chromosome 2p13.2 and is expressed in multiple tissues, including brain, liver, gonads, and embryonic structures. During embryogenesis, CYP26B1 expression establishes regional retinoic acid boundaries, preventing inappropriate activation of retinoic acid-responsive genes. In adults, CYP26B1 regulates tissue regeneration and detoxification of retinoid compounds.

Pathologically, mutations or altered CYP26B1 expression are associated with developmental defects such as craniofacial malformations, skeletal abnormalities, and infertility. Overexpression has also been linked to tumor progression via retinoid resistance. Research using CYP26B1 antibody supports studies in developmental biology, metabolism, and retinoid pharmacology.

CYP26B1 antibody is validated for western blotting, immunohistochemistry, and enzyme assays to detect cytochrome P450 enzymes involved in retinoid metabolism. NSJ Bioreagents provides CYP26B1 antibody reagents optimized for developmental, metabolic, and molecular biology research.

Structurally, Cytochrome P450 26B1 features conserved P450 motifs, including the heme-binding cysteine loop and oxygen activation domains. This antibody aids studies on CYP26B1's role in retinoid turnover, tissue patterning, and disease development.

## Application Notes

Optimal dilution of the CYP26B1 antibody should be determined by the researcher.

## Immunogen

E.coli-derived human CYP26B1 recombinant protein (Position: N101-A302) was used as the immunogen for the CYP26B1 antibody.

## Storage

After reconstitution, the CYP26B1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.


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