Product name: Anti-Lactoferrin antibody

Description: Rabbit polyclonal to Lactoferrin

Host species: Rabbit

Tested applications: Suitable for: IHC-P, ELISA, WB, IP, ICC

Species reactivity: Reacts with: Human

Immunogen: Full length native protein (purified) (Human).


General notes:
Lactoferrin is an iron binding glycoprotein with an approximate molecular weight of 80 kDa. The protein has two iron binding domains each housing one Fe$^{3+}$ and the synergistic CO$_3^{2-}$ ion. The crystal structure form of human lactoferrin at 2.2A resolution exhibits 5330 protein atoms, 2Fe$^{2+}$, 2CO$_3^{2-}$ and 98 carbohydrate atoms. Lactoferrin is absorbed from intestine by apical side of the membrane and localized to the nuclei. Intravenous infusion of lactoferrin is protective against lethal doses of E coli and induce bacteremia by a mechanism that downregulates neutrophil TNF alfa secretion. Recombinant human lactoferrin (rhLF), expressed and extracted from rice seed, is being evaluated for use as a dietary supplement to treat iron deficiency and/or iron deficiency induced anemia. Lactoferrin has been shown to have a role in the immune system and in early development of the embryo. A specific receptor for lactoferrin binding has been implicated in the human fetal intestine. Early embryonic localisation of lactoferrin by IHC has suggested its presence in various tissues including intestinal epithelium, kiney, and various regions of the brain.

Form: Liquid

Storage instructions: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

Storage buffer: Antibody stabilization buffer.

Purity: Immunogen affinity purified

Purification notes: Affinity purified using immobilized antigenic proteins and pre adsorbed on an immobilized heterologus lactoferin matrix to remove the cross reacting antibodies.
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Clonality
Polyclonal

Isotype
IgG

Applications
Our Abpromise guarantee covers the use of ab15811 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>ELISA</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. PubMed: 17244155</td>
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<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/500. Predicted molecular weight: 79 kDa.</td>
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<tr>
<td>IP</td>
<td></td>
<td>1/200.</td>
</tr>
<tr>
<td>ICC</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
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</table>

Target
Function
Transferrins are iron binding transport proteins which can bind two Fe(3+) ions in association with the binding of an anion, usually bicarbonate. Lactotransferrin has antimicrobial activity which depends on the extracellular cation concentration. Lactoferroxins A, B and C have opioid antagonist activity. Lactoferroxin A shows preference for mu-receptors, while lactoferroxin B and C have somewhat higher degrees of preference for kappa-receptors than for mu-receptors. The lactotransferrin transferrin-like domain 1 functions as a serine protease of the peptidase S60 family that cuts arginine rich regions. This function contributes to the antimicrobial activity.

Sequence similarities
Belongs to the transferrin family.
Contains 2 transferrin-like domains.

Cellular localization
Secreted.
Anti-Lactoferrin antibody (ab15811) at 1/500 dilution + Human Lactoferrin

**Predicted band size:** 79 kDa
**Observed band size:** 99 kDa

*why is the actual band size different from the predicted?*

ab15811 at a 1/150 dilution staining Lactoferrin in human tonsil and intestinal tissue sections by Immunohistochemistry (paraffin embedded) incubated for 20 minutes at 25°C. Fixed with formaldehyde, enzymatic antigen retrieval step performed using proteinase K for 5 minutes at 37°C. Secondary used undiluted polyclonal Goat anti-mouse/rabbit IgG.

*Images*

Western blot - Anti-Lactoferrin antibody (ab15811)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lactoferrin antibody (ab15811)

*This image is courtesy of an anonymous abreview.*

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