

Anti-Human CYP1A1 DyLight® 488 conjugated Antibody

Catalog Number: A00471-Dyl488

About CYP1A1

CYP1A1 is involved in phase I xenobiotic and drug metabolism (one substrate of it is theophylline). It is inhibited by fluoroquinolones and macrolides and induced by aromatic hydrocarbons. CYP1A1 is also known as AHH (aryl hydrocarbon hydroxylase). It is involved in the metabolic activation of aromatic hydrocarbons (polycyclic aromatic hydrocarbons, PAH), for example, benzo (a)pyrene (BP), by transforming it to an epoxide. In this reaction, the oxidation of benzo[a]pyrene is catalysed by CYP1A1 to form BP-7,8-epoxide, which can be further oxidized by epoxide hydrolase (EH) to form BP-7,8-dihydrodiol. Finally CYP1A1 catalyses this intermediate to form BP-7,8-dihydrodiol-9,10-epoxide, which is the ultimate carcinogen. However, an in vivo experiment with gene-deficient mice has found that the hydroxylation of benzo (a)pyrene by CYP1A1 can have an overall protective effect on the DNA, rather than contributing to potentially carcinogenic DNA modifications. This effect is likely due to the fact that CYP1A1 is highly active in the intestinal mucosa, and thus inhibits infiltration of ingested benzo (a)pyrene carcinogen into the systemic circulation.

Overview

Product Name	Anti-Human CYP1A1 DyLight® 488 conjugated Antibody
Reactive Species	Human
Description	Boster Bio Anti-Human CYP1A1 DyLight® 488 conjugated Antibody catalog # A00471-Dyl488. Tested in Flow Cytometry applications. This antibody reacts with Human.
Conjugate	DyLight®488
Application	Flow Cytometry
Clonality	Polyclonal
Formulation	Each vial contains 50% glycerol, 0.9% NaCl, 0.2% Na2HPO4, 0.02% NaN3.
Storage Instructions	At -20°C for one year from date of receipt. Avoid repeated freezing and thawing. Protect from light.
Host	Rabbit
Uniprot ID	P04798

Technical Details

Immunogen	E.coli-derived human CYP1A1 recombinant protein (Position: H183-D320). Human CYP1A1 shares 81.2% amino acid (aa) sequence identity with both mouse and rat CYP1A1.
Predicted Reactive Species	Bovine
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Liquid

Concentration	0.5-1mg/ml, actual concentration vary by lot. Use suggested dilution ratio to decide dilution procedure.
Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Flow Cytometry, 1-3ug/1x10⁶ cells</p>

Anti-Human CYP1A1 DyLight® 488 conjugated Antibody (A00471-Dyl488) Images

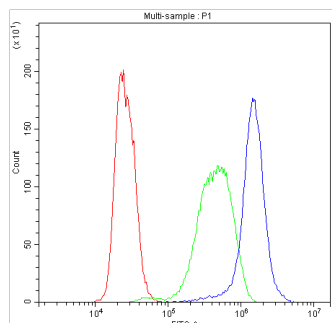


Figure 1. Flow Cytometry analysis of K562 cells using anti-Human CYP1A1 antibody (A00471-Dyl488). Overlay histogram showing K562 cells stained with A00471-Dyl488 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Human CYP1A1 Antibody (A00471-Dyl488, 1 μ g/1x10⁶ cells) for 30 min at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 μ g/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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