X488

Product Information

Catalog Number:	X488
Isotype:	Rat IgG (Wistar), derivatized
Contents:	100 µg DyLight488-labeled immunoglobulin derivative in phosphate buffered saline containing 0.2% BSA
Concentration:	0.2 mg/ml

For research use only, not for diagnostic or therapeutic use. This product is no medical device.

Specificity: This antibody preparation contains a rat IgG derivative against the GPIbβ subunit of the murine platelet/megakaryocyte-specific GPIb-V-IX complex. The modified antibody has been optimized for the easy and stable *in vivo* labeling of circulating platelets in mice. At the recommended concentration (0.1 µg/g body weight), X488 is non-cytotoxic and does not interfere with platelet adhesion and aggregation *in vivo*. Also, X488 does not alter platelet adhesion on collagen/von Willebrand factor *in vitro.*[1] *In vivo* platelet labeling has been used for intravital microscopical analysis of platelet involvement in pathological processes, such as thrombosis.[2,3]

Preparation and Storage: The antibodies were purified from hybridoma cell culture supernatant by Protein G-Sepharose chromatography and were biochemically modified. Stable for six months from date of shipment when stored at 4°C in the dark. KEEP STERILE, the preparation contains no preservative.

Usage: This preparation is optimized for rapid and stable *in vivo* labeling of mouse platelets.
Use 0.1 µg (0.5 µl) X488 per gram body weight in an appropriate volume (50–200 µl) of sterile PBS for i.v. injection. Platelets can be visualized using FITC-fluorescence filter sets and a light-sensitive camera. Recommended exposure time: 200 – 400 ms.

***In vivo* fluorescence microscopy of arterial thrombus formation using X488.** An anesthetized mouse (15 g) received 1.5 µg X488 in sterile PBS intravenously and the mesenteric artery was gently exteriorized through a midline abdominal incision. Arterioles (35-60 µm diameter) were visualized with a Zeiss Axiovert 200 inverted microscope (x10) equipped with a 100 W HBO fluorescent lamp source and a CCD camera (CV-M300). Injury was induced by topical application of a 3 mm^2 filter paper saturated with $FeCl_3$ (15%) for 10 s. Adhesion and aggregation of fluorescently labeled platelets in arterioles were monitored until complete occlusion occurred (blood flow stopped for >1 min). Note that adhesion of single platelets can be detected at t=5 min.

References

1. emfret Analytics, unpublished
2. Falati *et al*. (2002) Real-time in vivo imaging of platelets, tissue factor and fibrin during arterial thrombus formation in the mouse. Nature Medicine **8**, 1175-1181.
3. Grosse *et al.*, (2007): An EF hand mutation in Stim1 causes premature platelet activation and bleeding in mice. J Clin Invest. **117**, 3540-3550.