Product Data Sheet

**Get a new vision of cell metabolism**

Easily highlight mitochondrial toxicity or oxidative phosphorylation to glycolysis switch with the Glut1.RBD and FLVCR1.RBD, by detecting Glut1 and FLVCR1 upregulation.

**Identity Card**

- **Catalog Number**: MitoTox-25
- **Size**: 25 tests for each RBD
- **Isotype**: Mouse IgG1 and Rabbit IgG1 Fc fusion
- **Transporters**: Glut1 (*SLC2A1*) + FLVCR1 (*SLC49A1*)
- **Reactivity**: All RBDs recognize human transporters
- **Preparation**: The RBDs were purified by affinity chromatography
- **Formulation**: Phosphate-buffered solution, pH 7.4, containing 0.1% sodium azide and 20% glycerol
- **Storage**: The RBD solution should be stored undiluted at -20°C

**Applications**

**Applications**: Flow cytometry / Immunofluorescence - *Quality tested*

**Recommended Usage**: Each lot of RBD is quality control tested by immunofluorescence staining and analyzed by flow cytometry. For flow cytometry applications, the suggested use of this reagent is 1 to 5 μL for 10^5 cells in 100 μl volume (10^6 cells.mL^-1). It is recommended that the reagent be titrated for optimal performance for each application. Detailed protocols can be downloaded from our website.

⇒ Refer to the Product Data Sheet coming with your kit for the recommended volumes for each RBD lot included in your kit.
RBDs included

- **Glut1** (solute carrier family 2, facilitated glucose transporter member 1 -SLC2A1-) is the major glucose transporter. It is expressed on most cell types, being a key player of basal glucose metabolism, and as such can be disregulated by conditions triggering, or requiring, energetic modulations such as glucose starvation, oxphos vs. glycolysis switches, malignancies (Warburg effect) etc. All these processes induce an upregulation of Glut1 at the cell membrane. 

- **FLVCR1** (solute carrier family 49, facilitated heme transporter member 1 –SLC49A1-) is the only, experimentally demonstrated, heme exporter at the cell surface. It plays a critical role in erythropoiesis by protecting developing erythroid cells from heme toxicity. More generally, it regulates free intracellular heme concentration to control heme intrinsic toxicity along with heme oxygenases. It is highly implicated in cellular oxidoreductive metabolism. Mitochondrial toxicity triggering mitochondrial suffering induces an upregulation of FLVCR1 at the cell surface.

Plate Layout

Visit our website to download the detailed protocol to use this kit and quantify these SLCs at the surface of your cells, in one experiment. Workflow is designed for 96-well plates, but can be adapted to labeling in FACS tubes.

If you wish you can use these reagents one at a time, as you do with regular antibodies.

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Reference