

Monensin Solution (1,000X)**Catalog # / Size:** 2703505 / 1 ml**Isotype:****Formulation:** Monensin Solution is supplied as a 1000X working solution in 70% Ethanol. Dilute to 1X in cell culture medium.**Concentration:** 2**Applications:****Applications:** Flow Cytometry**Recommended Usage:** Dilute the 1000X solution to 1X in the tissue culture medium. It is recommended that cells are cultured with monensin for \leq 24 hours, as this can become toxic for cell viability.**Application References:**

1. Smeltz RB. 2007. *J. Immunol.* 178:4786.
2. Fuse S, *et al.* 2007. *J. Immunol.* 178:5227.
3. Durkin ET, *et al.* 2008. *Blood* 10:1182. [PubMed](#)
4. Durkin ET, *et al.* 2008. *Blood* 112:5245. [PubMed](#)
5. Liu XS, *et al.* 2009. *J. Immunol.* 183:51. [PubMed](#)
6. Mattarollo SR, *et al.* 2010. *J. Immunol.* 184:1242. [PubMed](#)
7. Yang M, *et al.* 2010. *J. Immunol.* 184:3321. [PubMed](#)
8. Mattarollo SR, *et al.* 2010. *J. Immunol.* 184:5663. [PubMed](#)
9. Wood MW, *et al.* 2011. *Infect Immun.* 79:708. [PubMed](#)
10. Janune D, *et al.* 2011. *FEBS Lett.* 585:3033. [PubMed](#)
11. Fiorenza S, *et al.* 2012. *J. Immunol.* 189:5622. [PubMed](#)
12. Asgari E, *et al.* 2013. *Blood.* 122:3473. [PubMed](#)
13. Li D, *et al.* 2013. *Clin Immunol.* 149:411. [PubMed](#)
14. Bunse CE, *et al.* 2013. *PLoS One.* 8:77925. [PubMed](#)

Description: Monensin is a protein transport inhibitor commonly used to enhance intracellular cytokine staining signals by blocking transport processes during cell activation. Especially useful for the intracellular staining of cytokines, monensin leads to the accumulation of most cytokines at the Golgi Complex/Endoplasmic Reticulum (see Jung, *et al.*, 1993). Optimal conditions for use are cell type and time-dependent. Typically, protein transport inhibitors are included during *in vitro* cell activation cultures for 4-24 hours prior to harvest (see references below for additional information). Monensin Solution is supplied as a 1,000X solution, which should be diluted to 1X in cell culture medium.**Antigen References:**

1. Current Protocols in Immunology (John Wiley & Sons New York) Unit 6.24 *Detection of Intracellular Cytokines by Flow Cytometry* (Barbara Foster and Calman Prussin NIAID NIH Bethesda MD).
2. Sander B, *et al.* 1991. *Immuno*