

# 5x Annexin V Binding Buffer

**Code No.**  
4695-300

**Quantity**  
50 mL

## BACKGROUND:

Apoptosis, a term that describes regulated cell death, is fundamental feature of many processes including normal development, homeostasis and disease. Early during the process of apoptosis, cells lose their phospholipids membrane asymmetry and expose phosphatidylserine (PS) at the cell surface. This process can be monitored by using Annexin V which is a  $\text{Ca}^{2+}$ -dependent phospholipids binding protein with high affinity for PS, and is useful for identifying apoptotic cells with exposed PS. Translocation of PS to the external cell surface is not unique to apoptosis, but occurs also during cell necrosis. The difference between these two forms of cell death is that during the initial stages of apoptosis the cell membrane remains intact, while at the very moment that necrosis occurs, the cell membrane loses its integrity and becomes leaky. Therefore, necrotic cells easily stained with Propidium Iodide (PI) as well as Annexin V, whereas Apoptotic cells stained only with Annexin V.

## FORMULATION:

50 mM HEPES/NaOH pH 7.4  
750 mM NaCl  
25 mM KCl  
5 mM  $\text{MgCl}_2$   
9 mM  $\text{CaCl}_2$

## STORAGE:

This solution is stable for two years from the date of manufacture when stored at 4°C.

## APPLICATIONS:

This solution can be used as reaction buffer for Annexin V.

## PREPARATION:

Before use, dilute this 5 x Binding Buffer to 1 x with distilled or deionized water. For example, to make 1 mL of 1 x Binding Buffer, add 200  $\mu\text{L}$  of 5 x Binding Buffer to 800  $\mu\text{L}$  of water and mix thoroughly.

## INTENDED USE:

For Research Use Only. Not for use in diagnostic procedures.

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