

## Sarcoplasmic reticulum release channels from frog skeletal muscle display two types of calcium dependence

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Calcium channels derived from sarcoplasmic reticulum of frog skeletal muscle were fused with planar lipid bilayers. Fractional open times displayed two types of calcium dependence: (i) blockable channels showed a bell-shaped calcium dependence with an activation constant of  $4.5 \mu\text{M}$ , a Hill coefficient for activation of 1.46 and a blocking constant of  $226 \mu\text{M}$ , and (ii) non-blockable channels displayed a sigmoidal calcium dependence with an activation constant of  $1.1 \mu\text{M}$  and a Hill coefficient of 1.42; no blocking effect was seen with calcium up to  $0.5 \text{ mM}$ . These two types of calcium dependence may underlie the coexistence of two different pathways for calcium release in frog skeletal muscle. © 1993.