Staining nuclei with Hoechst or DAPI

HOECHST 33258 (Bisbenzimide H 33258) (EX/EM=346/460 nm):

Sigma B 1155
500 μg/ml stock in 100% methanol
Store in dark at -20C

Hoechst intercalates in A-T regions of DNA.

Use 1:1000 in PBS for 1-2 min.

Rinse 3X PBS 5 min each.

If using modified Boyden chambers with cells on filters, use DAPI (below) instead of Hoechst (Hoechst also stains filters, thus giving high background).

DAPI (4’,6-diamidino-2-phenylindole dihydrochloride)
(EX/EM=364/454 nm for DAPI-DNA complex):

Sigma D9542
DAPI binds to the minor groove of double-stranded DNA (preferentially to AT rich DNA)
1 mg/ml stock in H2O –Heat or sonication may be required.
Store in dark at -20C

Use 1:1000 in PBS for 10 min.

Rinse 3X PBS 5 min each.