

Dot blot validation of antibodies  
used in the ENCODE project:

Broad Institute ChIP-Seq Group

Michael Coyne, Xiaolan Zhang,  
Chuck Epstein, Brad Bernstein

# Protocol

- Dot Blot Fabrication:
  - Suitably modified peptides modeled on histone tails were obtained from Abcam.
  - Each peptide is added to Bio-Dot apparatus at 0.01 and 0.1 ug / 50uL total volume (BioRad)
  - Let sit on rocker 60 minutes.
  - Pull through with vacuum, wash once with 100uL TBS and twice with 200uL TBSTw.
  - Remove membrane from Bio-Dot and transfer to 10mL Pierce SuperBlock in tray.
  - Place on rocker for 30 minutes.
  - Dump off SuperBlock.
- Antibody hybridization and imaging:
  - Add Primary Antibody in 10mL total volume.
  - Place on rocker for 30 minutes.
  - Wash 3 x 5 minutes in TBSTw.
  - Add secondary antibody diluted in SuperBlock in 10mL total volume.
  - Place on rocker for 30 minutes.
  - Wash 3 x 15 minutes in TBSTw, 1 x 10 minutes in TBS.
  - Image using ECL and a FluorChem Peltier-cooled camera (Cell Biosciences)

**Antibody:** Rabbit Polyclonal to Histone H3 dimethyl Lys79

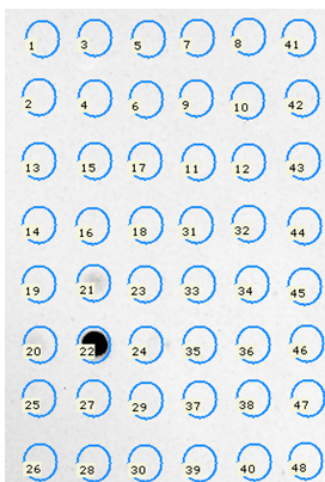
**Vendor:** Active Motif

**Immunogen:** This antibody was raised against a peptide including dimethyl-lysine 79 of histone H3.

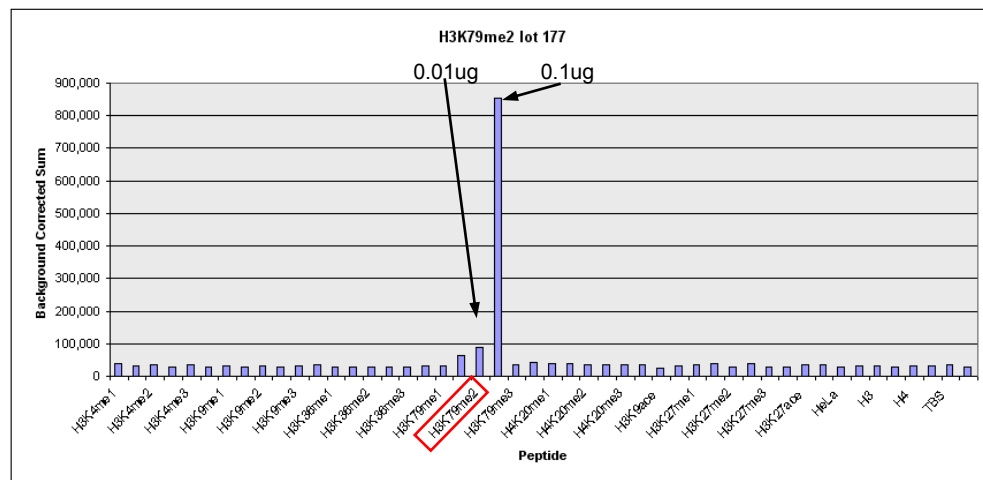
**Product Number:** 39143

**Lot Number:** 177

# • H3K79me2



Gel Setup						
	1	2	3	4	5	6
A	K4m1 0.01ug	K4m2 0.01ug	K4m3 0.01ug	K9m1 0.01ug	K9m1 0.1ug	Hela 0.01ug
B	K4m1 0.1ug	K4m2 0.1ug	K4m3 0.1ug	K9m2 0.01ug	K9m2 0.1ug	Hela 0.1ug
C	K36m1 0.01ug	K36m2 0.01ug	K36m3 0.01ug	K9m3 0.01ug	K9m3 0.1ug	H3 0.01ug
D	K36m1 0.1ug	K36m2 0.1ug	K36m3 0.1ug	K9ace 0.01ug	K9ace 0.1ug	H3 0.1ug
E	K79m1 0.01ug	K79m2 0.01ug	K79m3 0.01ug	K27m1 0.01ug	K27m1 0.1ug	H4 0.01ug
F	K79m1 0.1ug	K79m2 0.1ug	K79m3 0.1ug	K27m2 0.01ug	K27m2 0.1ug	H4 0.1ug
G	K20m1 0.01ug	K20m2 0.01ug	K20m3 0.01ug	K27m3 0.01ug	K27m3 0.1ug	TBS
H	K20m1 0.1ug	K20m2 0.1ug	K20m3 0.1ug	K27ace 0.01ug	K27ace 0.1ug	TBS



Performed at Broad Institute

### Protocol

- Add each peptide into BioDot at above concentrations in 50uL total volume
- Let sit on rocker 60 minutes
- Pull through with vacuum, wash once with 100uL TBS and twice with 200uL TBSTw
- Remove membrane from BioDot and transfer to 10mL Pierce SuperBlock in tray
- Place on rocker for 30 minutes
- Dump off SuperBlock and add Primary Antibody in 10mL total volume
- Place on rocker for 60 minutes
- Wash 3 x 5 minutes in TBSTw
- Add secondary antibody diluted in SuperBlock in 10mL total volume
- Place on rocker for 30 minutes
- Wash 3 x 15 minutes in TBSTw, 1 x 10 minutes in TBS
- Develop in Fluorchem

Test Date 4/13/2010  
User MC

### Primary Antibody H3K79me2

Vendor Active Motif  
Part # 39143  
Lot # 177  
Concentration 1 :2500  
Incubation Time 60m

### Secondary Antibody

Vendor USB #72560  
Part # 72560  
Lot # 123941  
Concentration 1 :10,000  
Incubation Time 30m

Develop Time 5m