

Product Information

Recombinant Human Vitamin D-Binding Protein Conjugates

See [product page](#) for a full list of product names, unit sizes, and catalog numbers.

Storage and Handling

Store at 4°C, protected from light. Product is stable for at least 24 months from date of receipt when stored as recommended.

Conjugate Composition

These conjugates are provided at a concentration of 100 ug/mL. The storage buffer contains 1X PBS with 0.01% rBSA and 0.05% sodium azide.

Product Technical Information

See [product page](#) for spectral properties and other dye-specific technical information. See our [Spectra Viewer](#) to view and download the dye excitation and emission spectra.

Product Description

Vitamin D-Binding Protein (Vitamin D-BP, also known as GC Globulin) binds monomeric G-actin (1-3). Fluorescent conjugates of Vitamin D-BP can be used to stain monomeric G-actin in fixed and permeabilized cells. Vitamin D-BP staining can be used in combination with fluorescent phalloidin staining of F-actin to visualize the distribution of unpolymerized G-actin relative to actin filaments.

Biotium's Recombinant Human Vitamin D-BP Conjugates are labeled with a selection of our bright and photostable CF® Dyes for fluorescence microscopy.

References

1. J Biol Chem 255, 2270 (1980); 2. J Cell Biol 123, 1 (1993);
3. Biochim Biophys Acta 1452, 12 (1999).

Experimental Protocol

The following is an example staining procedure and may be adapted or optimized for different sample types.

Materials required but not provided

- HBSS with $\text{Ca}^{2+}/\text{Mg}^{2+}$
- PBS
- Paraformaldehyde, 4% in PBS (Cat. No. 22023) or other methanol-free formaldehyde fixative
- Triton® X-100

Procedure

1. Wash cells 3 times with buffer to remove culture medium. For adherent cells, we recommend using HBSS with $\text{Ca}^{2+}/\text{Mg}^{2+}$ to maintain cell attachment and morphology.
2. Fix cells on ice with 4% paraformaldehyde solution in PBS for 15 minutes.

Note: Methanol or any other solvent will disrupt F-actin during the fixation process. The preferred fixative is methanol-free formaldehyde.

3. Wash cells 3 times with PBS.
4. Permeabilize cells with 0.1% Triton® X-100 in PBS at room temperature for 10 minutes.
5. Wash cells 3 times with PBS.
6. Dilute Vitamin D-BP conjugate 1:25 to 1:10 in PBS for a final concentration of 4 ug/mL to 10 ug/mL. Prepare enough staining solution to completely cover the cells.

Note: Fluorescent phalloidin can be included in the same staining solution if desired.

7. Place the staining solution on the cells for 30 minutes at room temperature.
8. Wash cells 2-3 times with PBS.
9. Image the samples in PBS or fluorescence antifade mounting media in the appropriate fluorescence channel.

Related Products

Cat. No.	Product
00095-00101	ActinBrite™ High Affinity Phalloidin Conjugates
00027...00055	Phalloidin Conjugates
22023	Paraformaldehyde, 4% in PBS, Ready-to-Use Fixative
22033	1X PBS (2L) Buffer Powder Packets
40083...41040	NucSpot® Nuclear Stains
30131...30140	CytoLiner™ Fixed Cell Membrane Stains
70065, 70069	LipidSpot™ Lipid Droplet Stains
70054	MitoView™ Green
22030	AntiFix™ Universal Antigen Retrieval Buffer, 10X
23007, 23011	TrueBlack® Lipofuscin Autofluorescence Quencher
23014	TrueBlack® Plus Lipofuscin Autofluorescence Quencher, 40X in DMSO
23001	EverBrite™ Mounting Medium
23002	EverBrite™ Mounting Medium with DAPI
23003	EverBrite™ Hardset Mounting Medium
23004	EverBrite™ Hardset Mounting Medium with DAPI
23016	EverBrite™ Hardset Mounting Medium with NucSpot® 640
23017	EverBrite TrueBlack® Hardset Mounting Medium
23018	EverBrite TrueBlack® Hardset Mounting Medium with DAPI
23019	EverBrite TrueBlack® Hardset Mounting Medium with NucSpot® 640
23008	Drop-n-Stain EverBrite™ Mounting Medium
23009	Drop-n-Stain EverBrite™ Mounting Medium with DAPI
23005	CoverGrip™ Coverslip Sealant
41024-4L	Water, Ultrapure Molecular Biology Grade
23023, 23024	Super ^{HT} PAP Pen 2.0

Please visit our website at www.biotium.com for information on our life science research products, including fluorescent CF® Dye antibody conjugates and reactive dyes, fluorescent probes, Mix-n-Stain™ antibody labeling kits, and wide variety of cellular stains.

Triton X-100 is a registered trademark of The Dow Chemical Company.

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