

INDEX

A

Acylation 11–16, 30–33, 35–36
 Adenovirus 119, 122–124
 Affinity precipitation 50, 51
 Alizarin red 120, 121, 123–124
 Alkaline phosphatase (ALP) 82, 92, 120–123, 125
 Alkyne fatty acid 2, 3
 Axin 52, 95, 101, 102, 106–108, 165

B

BAT-Gal 69, 71, 77, 78, 128, 131, 132, 135
 β -catenin 49–59, 69, 71, 81, 92, 98, 101,
 102, 106–108, 123, 162, 165, 177
 destruction complex 95, 102

Biotinylation 41, 44
 Blue Sepharose (BS) 18–23, 26

C

Calvarial cell 119–123
 Cell adhesion molecules 63
 Cell polarity 61–68, 177
 Cell surface protein biotinylation 44
 Chemical biology 95
 Chemically-defined 184
 Chick 69–71, 78–80
 Click chemistry 2–5, 14, 30, 33, 35, 37
 CRISPR/Cas9 142, 144–146,
 148, 151–157
 Cultured cells 61–68, 98

D

Deacylase 30
 Drug delivery 112–114

E

Egg extracts 101–108
 Electroporation 70–76, 79
 Embryonic development 39, 92, 95, 96,
 100, 102, 141, 162
 Endothelial cells 183, 184, 186, 190–194
 Endothelial progenitor 183–195
 Epidermis 127, 128, 132, 138

F

Flow cytometry 40–43, 167, 174–177, 184, 188–195
 Frizzled (FZD) 39, 40, 42–47, 69,
 162, 163, 165
 Fusion protein 12, 36, 46, 52–53, 55–56

G

Glutathione S transferase (GST) 50–53, 55–57
 Gradient 65–67, 69, 76–77
 Growth factor-free system 184

H

Hair follicles 127, 133–135, 138
 Human embryonic stem cells (hESCs) 161, 168,
 173, 175, 176
 Human pluripotent stem cells (hPSCs) 161–179,
 183–195
 Hydrophobic proteins 18, 36

I

IgG fusion protein 12
 Immunofluorescence 49, 50, 63, 165
 Induced pluripotent stem cells (iPSCs) 161, 167, 192
 Inhibitor of β -catenin and Tcf (ICAT) 51
 In ovo 76
 Intestine 142, 146, 162

L

Lentivirus 142–144, 149, 167
 Lipoprotein-related receptor 6 (LRP6) 39, 42–43, 107

M

Metalloprotease 29, 30
 Mice 111–116, 121, 132,
 137, 138, 141
 Microscopy 2, 8, 47, 78, 82, 89,
 91, 131, 172

N

Non-canonical Wnt 61, 64, 162, 165, 177
 Notum 29–37

O

Organoids 141–158, 163
 Osteogenic differentiation 119–123, 125

P

Palmitoleate 13–15, 18, 30
 Porcupine 1, 2, 12, 18, 98, 111–116
 Proteasome 101, 165
 Proximity ligation 2, 4–6
 Pulse-chase
 Purified Wnt 25, 162

R

Receptor 39–47, 81, 101, 163

S

Serum-free 13, 14, 35, 184
 Skin 103, 121, 127–139, 162
 Small molecules 12, 106, 163, 165, 175, 183, 184
 Spinal cord 69, 71, 72, 75, 76, 78, 79

T

Tankyrase (Tnks) 95–100, 111
 T-cell factor (TCF) 49, 52, 71, 81, 84, 85, 90, 92,
 93, 95, 128, 129, 131–133, 135, 138, 165, 166, 175

Tiki 29–37
 Transgenic reporter 82, 129
 Transposase 83, 85, 87–89, 93

U

Ubiquitin 41, 44, 46, 47, 111, 163

W

Western blotting 16, 21, 40–42, 44, 97–100
 Wnt
 Wnt/ β -catenin signaling 39, 40, 49–59, 81,
 95, 96, 123, 127–139, 163, 165, 177, 184
 WNT1 69, 71, 78
 Wnt3a 4–8, 19, 21, 22, 24–26, 29–36, 50, 62, 69,
 115, 162, 165, 168, 169, 171, 172, 175, 176, 178
 Wnt5a 19, 21, 22, 24, 26, 61–67, 162
 Wnt974/LGK974 111–116

X

Xenopus laevis 102, 103

Z

Zebrafish 61, 81–100